

GOLD, PLACER

The numbered placer gold occurrences are shown on late 10, on page 29 in volume 2.

SOTIN COUNTY

Clarkston Placer (1)

Loc: Snake R. near Clarkston. **Ore:** Gold. **Ore min:** Gold, magnetite, ilmenite, zircon. **Assays:** River sand concentrated by panning gave \$24.99 per ton in gold, 572 lb. magnetite, 530 lb. ilmenite, and 30 lb. zircon per ton. **Ref:** 126.

Snake River Placer

Loc: Snake R., Asotin County. **Ore:** Gold. **Ore min:** Gold, zircon, ilmenite, magnetite. **Assays:** Natural sand 12¢ to \$1.64 per ton gold, tr. to 2 lb. per ton zircon, 12 to 18 lb. per ton ilmenite, 20 to 34 lb. per ton magnetite. **Ref:** 38-A, p. 1216. 126, p. 14.

ENTON COUNTY

Artesian Coulee Placer (1)

Loc: Sec. 6, (4-24E), 4 mi. E. of Alderdale. **Elev:** 250 ft. **Access:** On railroad. **Ore:** Gold. **Deposit:** Gravel in a deserted channel of the Columbia R. covering several square miles. **Assays:** 50¢ to \$2.00 per cu. yd. **Ref:** 158.

Berrian Island (Goody) Placer (4)

Loc: Sec. 1, (5-28E) and sec. 6, (5-29E), on N. bank of Columbia R. **Elev:** 300 ft. **Owner:** A. H. Goody, Inc., Tacoma, Wash. (1950). **Ore:** Gold. **Gangue:** Gravel. **Deposit:** Screened material from the J. G. Shotwell aggregate plant was run through sluice boxes and a low-grade conc. recovered. **Assays:** 2 to 6 mills per ton. **Prod:** Plant operated 6 weeks and conc. shipped to Tacoma smelter in 1949. **Ref:** 158.

Blalock Island Placer (3)

Loc: On Blalock Is., in Columbia R., near Patterson. **Owner:** R. C. Matney, Prosser, Wash., Fred Blake, Grandview, Wash., and others (1954—). **Ore:** Gold. **Prod:** Small amount 1954. **Ref:** 69-A, p. 8. 158.

Gone Busted Placer (2)

Loc: On Blalock Is., in Columbia R., near Patterson. **Ore:** Gold. **Prod:** Dry-land washing plant operated 1938-1940. **Ref:** 97, 1937, p. 458; 1938, p. 489; 1939, p. 476; 1940, p. 472.

Goody Placer

(see Berrian Island Placer)

IELAN COUNTY

Bloom Placer (14)

Loc: Sec. 1, (22-17E), on Peshastin Cr., 1 mi. above Nigger Cr., Blewett dist. **Elev:** 2,200 ft. **Access:** Near U. S. Highway 97. **Prop:** 3 claims. **Owner:** G. W. and J. M. Bloom and John Snider (1897). **Ore:** Gold. **Assays:** About 25¢ per yd. **Prod:** About \$100 by 1897. **Ref:** 63, p. 77. 67, p. 48.

Cook Placer (17)

Loc: Blewett dist. **Ore:** Gold. **Prod:** Unknown amount in 1908. **Ref:** 67, p. 48. 97, 1908, p. 578.

Crawford Placer (18)

Loc: Blewett dist. **Ore:** Gold. **Prod:** Unknown amount in 1908. **Ref:** 63, p. 77. 67, p. 48. 97, 1908, p. 578.

Deep Creek Placer (4)

Loc: Sec. 19, (27-18E), at the mouth of Deep Cr. **Prop:** 13 claims. **Owner:** Deep Creek Mining Co. (1897). **Ore:** Gold.

Assays: About 26¢ per yd. **Prod:** Unknown amount. **Ref:** 63, p. 79. 67, p. 48.

Entiat River Placers (6)

Loc: Along Entiat R. **Ore:** Gold. **Ref:** 13, p. 174.

Icicle Creek Placers (7)

Loc: Along Icicle Cr. **Ore:** Gold. **Prod:** Reportedly considerable. **Ref:** 13, p. 174.

Ingalls Creek Placer (12)

Loc: Sec. 25, (23-17E), on Peshastin Cr. at the mouth of Ingalls Cr. **Owner:** Mr. Hensel (1897). **Ore:** Gold. **Prod:** Unknown amount. **Ref:** 67, p. 48.

Lakeside Placer (3)

Loc: Secs. 14 and 15, (27-22E), near Lakeside. **Ore:** Gold. **Ref:** 67, p. 48.

Last Chance Placer (19)

(see Last Chance under gold, lode)

Leavenworth Placer (8)

Loc: Secs. 10 and 11, (24-17E), near Leavenworth. **Ore:** Gold. **Ref:** 67, p. 48.

Mad River Placer (5)

Loc: On Mad R. **Ore:** Gold. **Ref:** 105, 1898, p. 613.

Nigger (Negro) Creek Placers (15)

Loc: Secs. 2 and 3, (22-17E), from mouth of Nigger Cr. upstream for 2 mi. **Prop:** Many claims. **Owner:** Several. **Ore:** Gold. **Assays:** 10¢ to \$1.20 per yd. **Prod:** \$1,100 prior to 1897. **Ref:** 67, p. 48.

Peake and Son Placer (20)

Loc: Blewett dist. **Ore:** Gold. **Prod:** 1908. **Ref:** 97, 1908, p. 578.

Peshastin Creek Placers (24)

Loc: On upper reaches of Peshastin Cr. **Ore:** Coarse gold. **Deposit:** Placer gold found in best concentration on bedrock below gravels. **Assays:** Gold contains little silver. **Prod:** Has produced. **Ref:** 12, p. 8. 13, p. 173. 143, p. 78. 144, p. 9.

Railroad Creek Placer (2)

Loc: Secs. 16 and 17, (31-18E), on Railroad Cr. **Ore:** Gold. **Ref:** 67, p. 48.

Ruby Creek Placer (13)

Loc: Sec. 36, (23-17E), at mouth of Ruby Cr. **Prop:** 6 claims. **Owner:** James and Thomas Lynch, Riley Eisenhour, and Thomas Medhurst (1897). **Ore:** Gold. **Ref:** 67, p. 48.

Shaser Creek Placer (16)

Loc: SE¼ sec. 14, (22-17E), near mouth of Shaser Cr. **Ore:** Gold. **Assays:** Gold contains little silver. **Prod:** Unknown amount. **Ref:** 67, p. 48. 144, p. 9.

Simbach Placer (21)

Loc: Blewett dist. **Ore:** Gold. **Prod:** Unknown amount in 1908. **Ref:** 67, p. 49. 97, 1908, p. 578.

Solita Placer (22)

Loc: On Peshastin Cr. **Ore:** Gold. **Prod:** Unknown amount in 1931. **Ref:** 67, p. 49.

Stehekin River Placers (1)

Loc: Along Stehekin R. **Ore:** Gold. **Ref:** 13, p. 174.

Wednesday Placer (10)

Loc: On Wenatchee R. near Dryden. **Ore:** Gold. **Prod:** Unknown amount in 1931. **Ref:** 67, p. 49.

Wenatchee Placer (11)

Loc: Sec. 3, (22-20E), at Wenatchee. **Ore:** Gold. **Ref:** 67, p. 49.

Wenatchee River Placer (9)

Loc: Sec. 22, (24-18E), on Wenatchee R. 1½ mi. below Peshastin. **Owner:** W. M. Keene and O. A. Benjamin, Seattle, Wash. (1897). **Ore:** Gold. **Assays:** As much as \$1.00 per yd. **Prod:** Unknown amount. **Ref:** 67, p. 49.

Wilson Placer (23)

Loc: Blewett dist. **Ore:** Gold. **Prod:** Unknown amount in 1908. **Ref:** 67, p. 49.

CLALLAM COUNTY**Bartnes Placer**

(see Main and Bartnes Placer)

Big Wink Creek Placer

(see Morgan Placer)

Cedar Creek (Starbuck) Placer (8)

Loc: Near mouth of Cedar Cr. in E½ sec. 18, (29-15W). **Elev:** Sea level. **Access:** 10 mi. up the beach from La Push. **Owner:** J. M. Starbuck (1917). **Ore:** Gold, platinum. **Ore min:** Free gold, platinum, ilmenite, magnetite, chromite, zircon. **Deposit:** Gold and platinum occur in a beach placer in a 2- to 15-in. sand layer on the surface of a wave-cut bench in clay. The sand layer is said to be 400 ft. long and 100 ft. wide at low tide. **Assays:** Said to yield from 2 to 5 pennyweights of Au and Pt per cu. yd. Ratio of Pt to Au ranges from 1:5 to 1:15. **Prod:** Reported \$5,000 in gold and 5 oz. of crude platinum prior to 1917. **Ref:** 126, pp. 3-5.

Japanese Placer

(see Little Wink Placer)

Johnson Point Placer (7)

Loc: NW¼ sec. 5, (28-15W), at Johnson Point (Cape Johnson). **Access:** Reached by hiking 4 mi. N. along beach from La Push. **Ore:** Gold. **Deposit:** Beach placers and gold in Pleistocene deposits of the bench adjacent. **Assays:** Some pans of sand ran as high as 60¢ Au, and some panners recovered \$2 to \$10 per day. **Prod:** 1908. **Ref:** 135-A, p. 233.

Little Wink (Japanese, Sand Point) Placer (3)

Loc: Center S½SW¼ sec. 1, (30-16W), at mouth of Little Wink Cr. **Access:** Trail. **Ore:** Gold. **Deposit:** Reworked Pleistocene gravels in a beach placer. **Ref:** 158.

Lovelace Placer

(see Shi Shi Beach Placer)

Main and Bartnes Placer (6)

Loc: NW¼NW¼ sec. 19, (30-15W), near small stream. **Access:** Trail. **Prop:** 1 placer claim. **Owner:** Lee Main and A. Bartnes, Everett, Wash. (1940). **Ore:** Gold. **Deposit:** Sand and gravel cemented by clay and iron oxide. Some boulders a foot in dia. **Dev:** Irregular pit 30 ft. long, 15 ft. wide, and 6 ft. deep. **Improv:** Flume 150 ft. long (1940). **Ref:** 158.

Morgan (Big Wink Creek) Placer (3A)

Loc: NW¼NW¼NE¼ sec. 12, (30-16W), on beach 125 ft. NW. of mouth of Big Wink Cr. **Access:** Trail. **Owner:** S. D. Morgan (1940). **Ore:** Flour gold. **Deposit:** Reworked Pleistocene gravels at high-tide level. Boulders as much as 2 ft. in dia.; those 1 ft. in dia. are common. **Dev:** Pit 30 ft. long, 15 ft. wide, and 6 ft. deep. **Ref:** 158.

Morrow Placer (4)

Loc: SW¼SW¼ sec. 18, (30-15W), at high-tide level. **Elev:** 5 ft. **Access:** Trail. **Prop:** Placer claims. **Owner:** J. D. Morrow (1940). **Ore:** Flour gold. **Deposit:** Beach placer in which there is a 2-ft. layer of gravel reworked by wave action from Pleistocene gravel. **Dev:** An area 50 by 25 ft. has been worked. **Assays:** Spotty fine gold content av. \$4.00 per yd. **Prod:** Worked from 1932 to 1940. Best year's cleanup was \$1,678. **Ref:** 158.

Ozette Beach Placer (2)

Loc: Sec. 12, (31-16W), on the beach 2 mi. N. of mouth of Ozette R. **Elev:** Sea level. **Access:** Trail from Lk. Ozette. **Ore:** Gold, platinum. **Deposit:** Beach deposit of gold and platinum concentrated along surface of a wave-cut terrace in sandstone. **Prod:** Small amount in early 1900's. **Ref:** 3, p. 156. 97, 1916, p. 610. 126, pp. 3, 5. 135-A, pp. 232-233.

Sand Point Placer

(see Little Wink Placer)

Shi Shi Beach (Lovelace) Placer (1)

Loc: Beach between Portage Head and Point of Arches in secs. 18, 19, and 30, (32-15W). **Elev:** Sea level. **Access:** Road from Neah Bay reaches place on cliff above the beach. **Owner:** W. W. Lovelace (1908). **Ore:** Gold, platinum, iridium, osmium. **Ore min:** Magnetite, ilmenite, free gold, platinum, iridosmine, zircon. **Deposit:** Beach deposit in which a thin layer of fine heavy sand rests on a wave-cut terrace in sandstone overlain by 1 to 3 ft. of gravel and sand. Gold and platinum are found in the thin layer and in cracks in the bedrock. **Assays:** A conc. showed 1,120 lb. ilmenite, 96 lb. zircon, \$558.09 gold, \$20.45 platinum per ton. **Prod:** \$15,000 in gold prior to 1904 from this and Ozette placer. **Ref:** 3, pp. 154-156. 38-A, pp. 1218-1219. 47, vol. 17, 1906, p. 467. 97, 1908, p. 578. 126, p. 14. 135-A, p. 232.

Starbuck Placer

(see Cedar Creek Placer)

Sunset Creek Placer (9)

Loc: Sec. 19, (29-15W). **Ore:** Gold, platinum. **Ref:** 158.

Yellow Banks Placer (5)

Loc: 2 mi. S. of Sand Point in SW¼ sec. 18, (30-15W). **Elev:** Sea level. **Access:** Reached by hiking S. along beach from the Ozette R. or N. from La Push. **Owner:** D. J. Wright (1917). **Ore:** Gold, platinum. **Ore min:** Free gold, platinum, ilmenite, magnetite. **Deposit:** Beach deposit of gold and platinum concentrated on surface of a wave-cut terrace in Pleistocene drift. **Prod:** Small amount in early 1900 and in 1939. **Ref:** 3, pp. 156-157. 47, vol. 17, p. 467. 97, 1940, p. 476. 126. 135-A, p. 233. 141, p. 103.

CLARK COUNTY**Brush Prairie Placer (3)**

Loc: On Brush Prairie. **Ore:** Gold. **Ore min:** Free gold, magnetite, ilmenite. **Deposit:** Placer "black sands." **Assays:** A sample of conc. showed 1,176 lb. magnetite, 328 lb. ilmenite, \$57.05 gold per ton (1905). **Ref:** 38-A, pp. 1218-1219. 126, p. 14.

Camas Placer (4)

(see under titanium)

Lewis River Placer (2)

Loc: 5 mi. E. of Moulton on the Lewis R., 1 mi. above McMunn placer. **Elev:** 850 ft. **Access:** Road up E. Fk. Lewis R. **Owner:** Company from Portland, Oregon (1912). **Ore:** Gold. **Deposit:** Placer gravel in river bed. **Dev:** Pit 75 by 100 ft. and 30 ft. deep. **Improv:** \$30,000 hydraulic mining outfit (1912). **Assays:** 1 oz. Au recovered from 1 ton of black sand. **Prod:** 1 oz. of gold. **Ref:** 126, pp. 6-7.

McMunn Placer (1)

Loc: On E. Fk. Lewis R. about 4 mi. E. of Moulton. Approx. sec. 21, (4-4E). **Elev:** 800 ft. **Prop:** 1 placer claim. **Owner:** Harvey McMunn (1912). **Ore:** Gold, platinum. **Ore min:** Free gold, platinum, magnetite, hematite, limonite. **Deposit:** Gold and platinum occur in a thin veneer of gravel on bedrock and in cracks in the bedrock. Gold but not platinum found also in higher terrace gravels. **Assays:** Panning tests indicate the pay gravel to contain 0.126 gm. Pt, 1.14 gm. Au. **Prod:** McMunn reports \$150 in gold and 1½ oz. platinum. **Ref:** 126, pp. 6-9. 130, p. 85. 141, p. 103.

DOUGLAS COUNTY**Columbia River Placer**

Loc: Columbia R. **Ore:** Gold. **Ore min:** Gold, magnetite, chromite, ilmenite, zircon, monazite. **Assays:** 13 lb. of black sand recovered from 1 cu. yd. of gravel showed 1,414 lb. magnetite, 150 lb. chromite, 188 lb. ilmenite, 24 lb. zircon, 6 lb. monazite, \$30.59 gold per ton (1905). **Ref:** 38-A, pp. 1218-1219. 126, p. 14.

Trouble Placer

Loc: On Columbia R. at Stevenson's Ferry landmark. **Prop:** 1 placer claim. **Owner:** Mrs. Rebecca Stevenson, Barry, Wash. (1938). **Ore:** Gold. **Assays:** One man panned \$105 in 5 days. **Ref:** 158.

FERRY COUNTY**Alva Stout Placer (6)**

Loc: NW¼ sec. 2, (36-32E), Republic dist. **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 353.

Baby Ben Placer

(see Big and Baby Ben Placer)

Bacon Bar Placer (30)

Loc: N½ sec. 15, (28-33E), on N. side of Columbia R., about 1 mi. upstream from mouth of Sanpoil R. **Ore:** Gold. **Assays:** 15 samples showed 8¢ to 13¢ per cu. yd. **Ref:** 158.

Big and Baby Ben Placer

Loc: Ferry County. **Ore:** Gold. **Ref:** 97, 1935, p. 352.

Blance Placer (7)

Loc: Sec. 4, (36-32E), Eureka dist. **Owner:** Doblasna Lime & Mining Co., Republic, Wash. **Ore:** Gold. **Ref:** 158.

Blue Bar Island Placer (20)

Loc: Bar in Columbia R. near mouth of Stray Dog Cr., sec. 12, (31-36E). **Ore:** Gold. **Deposit:** Flour gold occurs in surficial layer of gravel in low bar. Said to be renewed by annual freshets. **Assays:** Panning tests indicate a miner with sluice or rocker might wash out 50¢ worth per day. **Ref:** 26, p. 66. 122, p. 177.

Bridge Creek Placer (18)

Loc: Secs. 31 and 32, (32-37E). **Ore:** Gold. **Ref:** 158.

Chas. V. Burnell Placer

Loc: Ferry County. **Owner:** Chas. V. Burnell, Wilbur, Wash. (1939). **Ore:** Gold. **Prod:** \$7,077 in 1938. **Ref:** 158.

Covington Bar Placer (29)

Loc: Sec. 9, (28-33E), on N. side of Columbia R. **Owner:** Henry Covington (1934). **Ore:** Gold. **Assays:** 19 test holes showed no values of importance except in a small area of less than 1 acre, where 5 holes tested gave an av. of 30¢ per cu. yd. **Ref:** 158.

Daisy Placer (12)

Loc: On W. bank of Columbia R., 2 mi. above Daisy. Approx. in sec. 1, (33-37E). **Ore:** Gold. **Gangue:** Iron-stained sand and gravel. **Deposit:** Terraces 20 to 30 ft. above river level contain a 6-in. paystreak at a depth of 1 ft. **Assays:** Samples of the paystreak ran 2¢ or 3¢ per cu. yd. **Ref:** 26, p. 68.

Davis Placer

Loc: Ferry County. **Ore:** Gold. **Prod:** 1933. **Ref:** 97, 1934, p. 296.

Dora B. Placer (8)

Loc: Sec. 4, (36-32E), Eureka dist. **Owner:** Doblasna Lime & Mining Co., Republic, Wash. **Ore:** Gold. **Ref:** 158.

Fish Placer

Loc: Along Columbia R. **Ore:** Gold. **Prod:** 1939, 1940. **Ref:** 97, 1940, p. 477; 1941, p. 472.

Frank Thorp Placer (4)

Loc: Republic dist. **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 353.

Fruitland Placer (15)

Loc: Covada dist. **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 352.

Gold Creek Placers (10)

Loc: Along Gold Cr. from mouth of Strawberry Cr. to W. Fk. Sanpoil R. **Ore:** Gold. **Dev:** Prospect pits only. **Assays:** "Color" or two of gold per pan. **Ref:** 122, p. 103.

Goosmus Creek Placer (2)

Loc: On Big Goosmus Cr., Danville area. **Owner:** A. E. Milton and Roy Hathaway, Curlew, Wash. (1950). **Ore:** Gold. **Deposit:** Placer deposit containing many boulders, along narrow creek bottom. **Improv:** Small sluicing outfit (1949). **Ref:** 69, p. 9. 158.

Hellgate Bar Placer (31)

Loc: Lot 5, sec. 13, (28-33E), N. side of Columbia R. **Owner:** United States. **Ore:** Gold. **Deposit:** A high bar had gravel 2½ to 3 ft. thick showing values of 21.8¢ per cu. yd. A lower bar had 7 or 8 acres of gravel 2 to 3 ft. thick av. 27¢ per cu. yd. A low bench 2 mi. long and 300 ft. to ½ mi. wide contains an iron-stained gold-bearing layer about 6 in. thick, 100 to 600 yd. wide, and 2 mi. long. **Assays:** The 6-in. paystreak av. 1¢ to 5¢ per cu. yd. **Prod:** Small amount in early 1900's. **Ref:** 26, pp. 62-63. 158.

Johnson Placer (13)

Loc: On bank of Columbia R. in NE¼ sec. 8, (32-37E). **Prop:** 1 placer claim. **Owner:** W. Johnson. **Ore:** Gold. Paystreak consists of 1 to 3 ft. of medium- to fine-textured gravel beneath 4 to 8 ft. of sand. **Dev:** Pit 2,000 cu. yd. in size. **Assays:** Av. of 5¢ per yd. from the pit. **Prod:** \$100 reported. **Ref:** 122, pp. 177-178.

Keller Placers (24)

Loc: Along Sanpoil R. near Keller. **Ore:** Gold. **Assays:** Panning tests "yielded but an inconsiderable quantity of gold." **Ref:** 122, p. 140.

Kettle River Placers (3)

Loc: Along Kettle R. **Ore:** Gold. **Ref:** 13, p. 174.

Kirby Bar Placer (35)

Loc: Secs. 15 and 16, (27-35E), on N. side of Columbia R., opposite Peach. **Owner:** J. M. Kirby, Peach, Wash. (1934). **Ore:** Gold. **Assays:** Panning indicated 38.7¢ per cu. yd. **Ref:** 158.

Long Placer

Loc: On Columbia R. **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 352.

Marcella Placer (5)

Loc: On Granite Cr., Republic dist. **Ore:** Gold. **Prod:** 1939. **Ref:** 97, 1940, p. 477.

Newton Placer

Loc: Ferry County. **Owner:** Newton Construction Co. **Ore:** Gold. **Prod:** 90,000 cu. yd. gravel was placered in 1939. **Ref:** 97, 1940, p. 477.

Ninemile Placer (25)

Loc: On Columbia R. near mouth of Ninemile Cr., probably in sec. 16, (29-35E). **Ore:** Gold. **Ore min:** Flake gold worth 0.02¢ per flake and much flour gold. **Deposit:** 2 terraces, one 30 ft. and the other 100 ft. above Columbia R. Paystreaks as much as 1 to 3 ft. thick in the terraces. **Dev:** Old Chinese workings extend $\frac{3}{4}$ mile along the river and 200 ft. back from the river. **Assays:** Paystreak av. a little more than 40¢ per yd. **Ref:** 26, pp. 64-65.

Peach Placer (34)

Loc: Opposite the town of Peach, on N. side of Columbia R. in secs. 14 and 15, (27-35E). **Ore:** Gold. **Deposit:** River terrace about 300 ft. above Columbia R. **Dev:** Considerable placer mining prior to 1910. **Assays:** Panning tests made in 1910 failed to reveal any colors. **Ref:** 26, p. 63.

Peach Island Placer (33)

Loc: Large island in Columbia R. between Peach and the mouth of Spokane R. **Ore:** Gold. **Deposit:** Gravel bar. **Dev:** Upriver end of island worked by Chinese to depth of 3 or 4 ft. prior to 1910. **Ref:** 26, p. 63.

Plum Bar Placer (28)

Loc: Lots 7 and 8, sec. 17, (28-32E), about 6 mi. up the Columbia R. from Grand Coulee Dam, on N. side of the river. **Owner:** Col. White (1934). **Ore:** Gold. **Assays:** 77,000 cu. yd. av. 33.1¢ per yd. **Prod:** J. H. Collins washed 700 to 800 cu. yd. per day in 1934. Produced 1938-1939. **Ref:** 97, 1939, p. 490; 1940, p. 477. **104,** 6/15/35, p. 27. **158.**

Rico Placer (11)

Loc: 20 mi. S. of Republic. **Ore:** Gold. **Assays:** 50¢ to 75¢ per cu. yd. **Ref:** 105, 1911, p. 417.

Rogers Bar Placer (22)

Loc: Sec. 23, (30-36E), on W. bank of Columbia R., 2 mi. below the town of Hunters. **Prop:** Bar is about $3\frac{1}{2}$ mi. long. **Owner:** Colville Indian Reservation. **Ore:** Gold, platinum. **Deposit:** 3 bars, 30, 75, and 100 ft. above the river, include 1,500 acres of land. The best pay gravel is found in bars exposed only at low water. **Assays:** Tests indicate paystreaks in the lower bar to run 1¢ to 50¢ per yd. in gold. **Prod:** 4 operators were working in 1934. **Ref:** 26, pp. 65-66. **97,** 1935, p. 352. **158.**

Sanpoil River, West Fork Placers (9)

Loc: Down W. Fk. from Gold Cr. to mouth of W. Fk. Sanpoil R. **Ore:** Gold. **Dev:** Prospect pits only. **Assays:** Greatest amount of Au from a single pan was 0.005¢. Est. 4¢ per cu. yd. **Ref:** 13, p. 174. **26,** p. 68. **122,** p. 103.

Singer Placer (1)

Loc: Secs. 4 and 5, (40-34E), on Fourth of July Cr., Danville dist. **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 352.

Sixmile Placer (26)

Loc: At mouth of Sixmile Cr., 6 mi. above the mouth of Spokane R. In sec. 34, (29-35E). **Ore:** Gold. **Ore min:** Flake

gold av. 0.01¢ in value, and considerable flour gold. **Deposit:** Terrace of Columbia R. Gold is found in the upper 2 ft. of the terrace, which consists of clayey silt and gravel. **Assays:** Upper 2 ft. of the section was found to have a value of 8¢ per cu. yd. **Ref:** 26, p. 64.

Stout Placer

(see Alva Stout Placer)

Stranger Creek Placer (14)

Loc: At mouth of Stranger Cr., opposite Gifford. **Ore:** Gold. **Deposit:** Bar contains a 1- to 3-ft. paystreak at a depth of 7 ft. Sampling indicates the paystreak to have a very limited extent. **Assays:** Panning tests indicate the paystreak runs $5\frac{1}{2}$ ¢ to 40¢ per cu. yd. **Ref:** 26, p. 67.

Stray Dog Placer (21)

Loc: Approx. sec. 12, (31-36E). **Ore:** Gold. **Gangue:** Gravel. **Deposit:** Thin layer of rusty gravel in the bank of a high-water channel of Columbia R. **Assays:** Panning tests yielded an av. of 100 particles of flour gold per pan worth between $\frac{1}{8}$ ¢ and $\frac{1}{4}$ ¢. **Ref:** 122, p. 177.

Taft Placer (16)

Loc: Covada dist. **Ore:** Gold. **Prod:** 1911. **Ref:** 158.

Thompson Placer (19)

Loc: River bar due E. of Covada, in sec. 6, (31-37E). **Prop:** 1 placer claim. **Owner:** James Thompson. **Ore:** Gold. **Deposit:** 6 in. of pay gravel on bank of Columbia R. **Dev:** Pit. **Assays:** Washing said to have yielded but "small wages." **Ref:** 122, p. 177.

Threemile Placer (27)

Loc: On Columbia R. 3 mi. above the mouth of Spokane R. In sec. 11, (25-35E). **Ore:** Gold. **Ore min:** Gold in large thin flakes about 0.01¢ in value and flour gold. **Deposit:** Bench 20 ft. above the river contains large angular boulders. Pay gravels occupy the spaces between boulders. **Assays:** A sample of gravel, exclusive of boulders, gave \$1.60 per ton in gold. **Prod:** Worked by Chinese prior to 1910. **Ref:** 26, p. 64.

Turtle Rapids Placer (17)

Loc: On Columbia R., 2 mi. above Blue Bar, near Turtle Rapids, near Covada. **Ore:** Gold. **Deposit:** Terrace 60 ft. above high water extending along the river for several miles contains a paystreak a few inches thick. **Dev:** Worked by Chinese. **Assays:** Panning tests indicate the paystreak to run 30¢ per cu. yd. **Ref:** 26, pp. 66-67.

Whitestone Placer (32)

Loc: Sec. 16, (28-34E), along Columbia R. **Ore:** Gold. **Prod:** 1933. **Ref:** 97, 1934, p. 296.

Wilmont Bar Placer (23)

Loc: Lot 6, sec. 4, (29-36E), on N. bank of Columbia R., opposite Jerome post office. **Ore:** Gold, cerium, thorium. **Ore min:** Monazite, magnetite, ilmenite, zircon, free gold. **Deposit:** 2 terraces, one 20 and the other 100 ft. above Columbia R. In lower terrace gold occurs in surficial 1 to 5 ft. of material. **Assays:** Lb. per ton: magnetite, 1,308; ilmenite, 150; monazite, 30; zircon, 60; gold, \$1.65 per ton. Panning tests indicate a value of 10¢ to 14¢ gold per cu. yd. in lower bar and a fraction of a cent per cu. yd. in the upper bar. **Prod:** 1934. **Ref:** 26, p. 65. **38-A,** pp. 1218-1219. **97,** 1935, p. 352. **126,** p. 15. **158.**

GARFIELD COUNTY

Pomeroy Placer

Loc: Near Pomeroy (?). **Ore:** Gold. **Deposit:** Placer "black sand." **Assays:** Conc. showed 426 lb. magnetite, 298 lb. ilmenite, 72 lb. zircon, \$17.36 gold and platinum per ton. **Ref:** 38-A, pp. 1218-1219. **126,** p. 14.

GRANT COUNTY

A. B. C. Placer (1)

Loc: Sec. 22, (18-23E). **Ore:** Gold. **Ref:** 158.

Chinaman Bar Placer (2)

Loc: Secs. 10 and 11, (13-24E), Chinaman Bar, on Columbia R., 4 mi. E. of Priest Rapids. **Owner:** A. H. and J. H. Miller, Ellensburg, Wash. (1941). **Ore:** Gold. **Prod:** 1939-1941. **Ref:** 22, p. 8. **97**, 1940, p. 477; 1941, p. 473.

HARVARD COUNTY

Cow Point Placer

Loc: On ocean beach, at Cow Point. **Ore:** Gold. **Assays:** A large sample showed 0.02 oz. Au per ton. **Ref:** 38-A, pp. 1218-1219. **126**, pp. 13-14.

Damons Point Placer

(see under titanium)

Kaufman Placer

Loc: Aberdeen area. **Ore:** Gold. **Prod:** 1908. **Ref:** **97**, 1908, p. 578.

Moclips Placer

(see under cerium)

Moclips River Placer (1)

Loc: Sec. 8, (20-12W). **Ore:** Gold. **Ref:** 158.

Oyhut Placer (2)

Loc: On ocean beach at Oyhut. **Ore:** Gold. **Assays:** 72¢ Au per ton. **Ref:** 38-A, pp. 1216-1217. **126**, p. 14.

Point Brown Placer (3)

Loc: Secs. 15 and 23, (17-12W). **Ore:** Gold. **Ref:** 158.

JEFFERSON COUNTY

Ruby Beach Placer (1)

Loc: E½NE¼ sec. 31, (26-13W), on tombolo between Abbey Is. and Ruby Beach. **Access:** Road. **Ore:** Gold. **Deposit:** Very fine-grained gold in beach sand. **Improv:** Gold recovery plant built about 1916, but never operated. **Ref:** 158.

KING COUNTY

Money Creek Placer (2)

Loc: Secs. 20 and 29, (26-11E). **Ore:** Gold. **Ref:** 158.

Raging River Placers (3)

Loc: Along Raging R. **Ore:** Gold. **Ref:** 13, p. 172.

Seattle Placer

Loc: Vicinity of Seattle. **Ore:** Gold, iron, chromium, platinum, thorium, cerium. **Ore min:** Magnetite, chromite, monazite. **Deposit:** Black sand sample tested by the U. S. Geological Survey. **Assays:** Sample contained 10.82 lb. magnetite, 1.18 lb. monazite, 0.28 lb. chromite, 31¢ gold per ton (1905). **Ref:** 38, p. 156.

Snoqualmie Placer (4)

Loc: On Middle Fk. of Snoqualmie R. **Ore:** Gold. **Assays:** Gold said to occur in paying quantity. **Ref:** 13, p. 167.

Snoqualmie River Placers

Loc: Along Snoqualmie R. **Ore:** Gold. **Ref:** 13, p. 172.

Tolt River Placer (1)

Loc: SE¼ sec. 29, (26-8E), on Tolt R. **Ore:** Gold. **Deposit:** Fine placer gold said to occur in top 18 in. of gravel in the river bars in this vicinity. **Ref:** 158.

KITITITAS COUNTY

Baker Creek Placers (7)

Loc: Along Baker Cr. above its junction with Swauk Cr. **Ore:** Gold. **Deposit:** One nugget found on a bench of Swauk Cr. above the mouth of Baker Cr. had a value of \$1,004. **Ref:** 88, p. 88.

Battle Axe Placer

Loc: On Cle Elum R. **Owner:** John H. Corbins and William McKasson (1897). **Ore:** Gold. **Ref:** 63, p. 66.

Bear Cat Placer (6)

Loc: Sec. 33, (21-17E), Swauk dist. **Ore:** Gold. **Prod:** 1930. **Ref:** **97**, 1930, p. 673.

Becker Placer (13)

Loc: Sec. 10, (20-17E), Swauk dist. **Ore:** Gold. **Prod:** Has produced. **Ref:** **97**, 1915, p. 570; 1916, p. 612.

Beckman Placer

Loc: Swauk dist. **Ore:** Gold. **Prod:** Has produced. **Ref:** 105, 1914, p. 473.

Big Salmon La Sac Placer (2)

Loc: On Cle Elum R. at Big Salmon La Sac. **Owner:** R. DeWitt and William Taylor (1897). **Ore:** Gold. **Ref:** 63, p. 66.

Black Bar Placer

Loc: Swauk dist. **Ore:** Gold. **Prod:** 1939. **Ref:** 63, p. 67. **97**, 1940, p. 478.

Black Jack Placer

Loc: Liberty dist. **Ore:** Gold. **Prod:** 1922, 1923. **Ref:** **97**, 1922, p. 254; 1923, p. 413. **141**, p. 22.

Boulder Creek Placer (10)

Loc: At junction of Boulder and Williams Creeks, sec. 1, (20-17E). **Owner:** Salem Mining Co. (1936). **Ore:** Gold. **Deposit:** Stream gravels. Pay dirt found at or closely above bedrock. **Assays:** 50¢ to \$40 per yd. **Prod:** Considerable. (1936). **Ref:** **97**, 1937, p. 551. **143**, p. 77. **144**, p. 9.

Bovee Placer

Loc: N½ sec. 22 (?), (21-17E), near Blewett highway, ½ mi. N. of Mineral Springs. **Prop:** 3 claims: Nellie, Telephone, Television. **Owner:** Charles W. Bovee, Bellevue, Wash. (1955—). **Ore:** Gold. **Ref:** 158.

Bryant Bar (Deer Gulch) Placer (14)

Loc: Sec. 10, (20-17E), Swauk dist. **Prop:** 65 acres. **Owner:** Deer Gulch Placers, Inc., Seattle, Wash. (1938). **Ore:** Gold. **Ore min:** Coarse free gold. **Deposit:** Cemented gravel on a bench. Bedrock is flat. **Dev:** 325 ft. of drifts. **Assays:** Av. 35¢ per yd., max. 90¢ per yd. **Prod:** 1939. **Ref:** **97**, 1940, p. 478. **104**, 2/15/39, 3/15/39. **108**, 12/39, p. 19.

Burcham Placer (15)

Loc: NE¼ sec. 10, (20-17E), Swauk dist. **Owner:** Nunzio Dilauro, Liberty, Wash. (1938). **Ore:** Gold. **Prod:** 1934, 1936. **Ref:** **97**, 1935, p. 353; 1937, p. 551.

Cedar Creek Placer (17)

Loc: NE¼ sec. 3, (20-17E). **Ore:** Gold, silver. **Prod:** 1918. **Ref:** **97**, 1918, p. 506.

China Camp Placer

(see under platinum)

Cle Elum Placer (4)

Loc: On Cle Elum R. near town of Cle Elum. **Ore:** Gold. **Prod:** Reportedly considerable. **Ref:** 12, pp. 9, 95.

Cle Elum River Placer

Loc: Along Cle Elum R. from near headwaters to a place about halfway to its mouth. **Ore:** Gold. **Ref:** 13, p. 173. 63, p. 66.

Deer Gulch Placer

(see Bryant Bar Placer)

Dennett Placer (16)

Loc: SE¼ sec. 10, (20-17E), Swauk dist. **Owner:** Cascade Chief Mining Co. (1934). **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 353. 104, 4/30/34, p. 22.

Discovery Placer

Loc: Swauk dist. **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 353.

Elliott Placer

Loc: On Williams Cr. **Prop:** 1 claim. **Ore:** Gold. **Assays:** One nugget found in 1900 had a value of \$1,100. **Ref:** 63, p. 68. 88, p. 88.

Emma Placer

Loc: Swauk dist. **Owner:** Golden Rule Mining Co. (1908-1932). **Ore:** Gold. **Ref:** 97, 1905, p. 336; 1908, p. 579. 106, 2/4/32.

Ford Placer

Loc: Swauk dist. **Owner:** Cedar Valley Gold Mining Co. (1909-1915). **Ore:** Gold. **Prod:** 1912. **Ref:** 158.

Fortune Creek Placer (1)

Loc: On Cle Elum R. near mouth of Fortune Cr. **Owner:** Messrs. Hicks and Jones (1897). **Ore:** Gold. **Ref:** 63, p. 66.

Fountain Head Placer

Loc: Swauk dist. **Ore:** Gold. **Prod:** 1908. **Ref:** 97, 1908, p. 579. 158.

Fraction Placer (18)

Loc: Sec. 10, (20-17E), Swauk dist. **Ore:** Gold. **Prod:** Amount not known. **Ref:** 97, 1916, p. 612.

General Minerals Placer (27)

Loc: Ellensburg area. **Owner:** General Minerals Co., Seattle, Wash. (1952). **Ore:** Gold. **Ref:** 133, p. 33.

Gold Bar Placer (21)

Loc: Sec. 15, (20-17E), Swauk dist. **Prop:** 3 claims. **Owner:** B & B Gold Mines, Inc., Cle Elum, Wash. **Ore:** Gold. **Prod:** 1939. **Ref:** 97, 1940, p. 478. 158.

Golden Rule Placer

Loc: Swauk dist. **Ore:** Gold. **Prod:** More than \$93,000 prior to 1934. **Ref:** 97, 1908, 1915, 1916, 1918, 1922, 1924, 1934. 106, 2/4/34, p. 14.

Hamilton Placer

Loc: Swauk dist. **Ore:** Gold. **Prod:** 1915-1916. **Ref:** 97, 1916, p. 612.

Hampton Placer

Loc: Swauk dist. **Ore:** Gold. **Prod:** 1915. **Ref:** 97, 1915, p. 570.

Hinds Placer

(see Needham and Hinds Placer)

Hinton-McCauley Placer (8)

Loc: Sec. 36, (21-17E). **Ore:** Gold. **Prod:** 1915. **Ref:** 97, 1915, p. 570.

Hope Placer

Loc: Swauk dist. **Ore:** Gold. **Prod:** 1912. **Ref:** 158.

Kittitas Placer

Loc: Kittitas County. **Ore:** Gold, iron, chromium. **Deposit:** Black sand sample tested by the U. S. Geological Survey. **Assays:** Sample carried 1,643 lb. magnetite, 188 lb. chromite, \$315.00 gold per ton. **Ref:** 38, p. 156.

Laurel Placer

Loc: Swauk dist. **Ore:** Gold. **Prod:** 1915. **Ref:** 158.

Little May Placer

(see Weninger and Little May Placer)

Livingston Bar Placer

Loc: Livingston Bar, Swauk dist. **Owner:** B & B Gold Mines, Inc., Seattle, Wash. (1939). **Ore:** Gold. **Ref:** 104, 2/15/39; 7/30/39.

McCauley Placer

(see Hinton-McCauley Placer)

Magpie Canyon Placer (26)

Loc: NE¼ sec. 34, (19-18E). **Ore:** Gold. **Ref:** 158.

Manastash Creek Placer (5)

Loc: Sec. 7, (18-15E). **Ore:** Gold. **Ref:** 158.

Midnight Star Placer

Loc: Swauk dist. **Ore:** Gold. **Prod:** 1908. **Ref:** 97, 1908, p. 579.

Naneum Creek Placer (9)

Loc: Secs. 25 and 26, (21-18E). **Ore:** Gold. **Ref:** 158.

Needham and Hinds Placer

Loc: Swauk dist. **Ore:** Gold. **Prod:** 394,000 cu. yd. of gravel treated in 1940. **Ref:** 97, 1941, p. 473.

Nez Jensen Placer

Loc: Swauk dist. **Ore:** Gold. **Prod:** 1902. **Ref:** 100, 1902, p. 80.

Nugget Placer (11)

Loc: Secs. 1 and 2, (20-17E) and sec. 6, (20-18E). **Owner:** Nugget Properties, Inc., Seattle, Wash. (1952—). **Ore:** Gold. **Prod:** 1952. **Ref:** 108, 1/53, p. 90. 133, p. 37.

Old Bigney Placer (12)

Loc: SW¼ sec. 1, (20-17E), near Liberty. **Ore:** Gold. **Prod:** More than \$200,000 prior to 1903. Produced 1908, 1915, 1916, 1923. **Ref:** 97, 1908, 1915, 1916, 1923. 105, 1914, p. 473. 141, p. 22.

Perry Placer (25)

Loc: On Yakima R. about 2 mi. below mouth of Swauk Cr. Probably in sec. 28, (19-17E). **Owner:** F. C. Porter, Thorp, Wash. (1934). **Ore:** Gold. **Dev:** Small pit. **Assays:** 36¢ per yd. **Prod:** Small amount in 1934. **Ref:** 158.

Princeton Bar Placer

Loc: At Princeton Bar, Cle Elum R. **Owner:** L. F. McConihe (1897). **Ore:** Gold. **Ref:** 63, p. 66.

Sheep Springs Placer (23)

Loc: SE¼ sec. 17, (19-17E), Swauk dist. **Access:** Road and trail. **Ore:** Gold. **Ore min:** Free gold, very fine. **Deposit:** Gravels similar in appearance to those at Swauk Cr. **Assays:** Est. 8¢ to 10¢ per cu. yd. **Ref:** 158.

Sunflower Placer

Loc: Liberty, Swauk dist. **Ore:** Gold. **Prod:** 1908, 1916. **Ref:** 97, 1908, p. 612; 1916, p. 579. 141, p. 22.

Sunny Bar Placer

Loc: Swauk dist. **Ore:** Gold. **Prod:** 1934-1939. **Ref:** 97, 1935-1940.

Swauk Creek Placers (22)

Loc: Along Swauk Cr. between the mouths of Baker and First Creeks. **Ore:** Gold. **Deposit:** Gravels from a few feet to 70 or 80 ft. in thickness. Pay gravels are found on and near bedrock. **Assays:** Gravel varies from a few cents to \$40 per yd. **Prod:** Considerable. **Ref:** 13, p. 174. 88, pp. 87-88. 143, pp. 76-78. 144, p. 9. 159, pp. 137-138.

Swauk Mining & Dredging Placer (19)

Loc: Secs. 3 and 10, (20-17E). **Owner:** Swauk Mining & Dredging Co., Cle Elum, Wash. (1921-1949). **Ore:** Gold. **Assays:** Tests prior to 1923 showed 32¢ per yd. **Prod:** 1933. **Ref:** 12, p. 8. 68, p. 17. 97, 1921, p. 426; 1934, p. 296. 98, 1922, p. 1667; 1925, p. 1834; 1926, p. 1597. 129, p. 276. 141, p. 22.

Teaway River Placers (3)

Loc: Along Teaway R. **Ore:** Gold. **Ref:** 13, p. 173.

Theresa Placer

Loc: Swauk dist. **Ore:** Gold. **Prod:** 1915. **Ref:** 158.

Weninger and Little May Placer

Loc: Liberty. **Ore:** Gold. **Prod:** 1922-1923. **Ref:** 97, 1922, p. 254; 1923, p. 413. 141, p. 22.

Williams Creek Placers (20)

Loc: Along Williams Cr. near Liberty and at its junction with Swauk Cr. **Ore:** Gold. **Deposit:** Good pay gravel is found within 3 or 4 ft. of bedrock and 70 or 80 ft. below present stream level. **Prod:** Considerable. **Ref:** 88, p. 88. 143, p. 77. 144, p. 9.

Yakima River Placer (24)

Loc: Secs. 20 and 21, (19-17E). **Ore:** Gold. **Ref:** 158.

LINCOLN COUNTY**Angle Placer**

(see Keller Ferry Placer)

Barnell Placer (1)

Loc: Sec. 7, (28-33E), at Swawilla Basin, near Plum, ½ mi. below the ferry. **Owner:** Mr. Mays, Coeur d'Alene, Idaho. **Ore:** Gold. **Prod:** \$200 to \$400 per week in 1938. **Ref:** 158.

China Bar Placer (7)

Loc: Secs. 12 and 13, (27-35E), on E. side of Columbia R. **Ore:** Gold. **Deposit:** Low bar containing gold in upper portion. Bar covers about 250 acres. Gravel tested to a depth of 6 ft. av. about 20¢ per cu. yd. **Assays:** 2¢ or 3¢ per cu. yd. **Prod:** 1928. Said to have been worked out by Chinese. **Ref:** 26, p. 68. 97, 1929, p. 426. 158.

Clark Placer (2)

Loc: SE¼NE¼ sec. 8, (28-33E), along Columbia R. **Ore:** Gold. **Prod:** \$4,657 in 1933, \$8,243 from 19,700 yd. of gravel in 1934. **Ref:** 97, 1933, p. 296; 1935, p. 353.

Creston Ferry Placer (5)

Loc: Sec. 2, (27-34E), at Creston Ferry. **Ore:** Gold. **Deposit:** River bench. **Dev:** A portion of the bench was worked by placer miners prior to 1910. **Ref:** 26, p. 63.

Davenport Placer

Loc: Near Davenport (?). **Ore:** Gold. **Assays:** A cu. yd. of gravel yielded 25 lb. of conc. which showed 664 lb. magnetite, \$59.12 gold per ton. **Ref:** 38-A, pp. 1218-1219. 126, p. 15.

Keller Ferry (Angle) Placer (3)

Loc: E½ sec. 8, (28-33E), opposite the mouth of Sanpoil R. **Owner:** James E. Angle (1932-1934). **Ore:** Gold. **Prod:** 1932. 186.8 oz. Au from 11,628 cu. yd. of gravel in 1933-1934. **Ref:** 104, 6/30/33, p. 18. 158.

Latta and Phillips Placer

Loc: 15 mi. up Columbia R. from Grand Coulee Dam. **Owner:** Messrs. Latta and Phillips leasing from State (1934). **Ore:** Gold. **Ref:** 158.

Peach Bar Placer (6)

Loc: Sec. 22, (27-35E), at village of Peach. **Ore:** Gold. **Deposit:** Low bar. **Assays:** Panning gave an av. of 19¢ per cu. yd. **Ref:** 158.

Phillips Placer

(see Latta and Phillips Placer)

Winkelman Bar Placer (4)

Loc: S½ sec. 9, (28-33E). **Owner:** Mr. Winkelman (1934). **Ore:** Gold. **Ore min:** Free gold. **Assays:** 2 composite samples showed 22.5¢ and 20.0¢ per cu. yd. **Ref:** 158.

OKANOGAN COUNTY**Altoona Placer (9)**

Loc: Myers Cr. dist. **Ore:** Gold. **Prod:** 1902. **Ref:** 100, no. 4, 1902, p. 77.

Ballard Placer (20)

Loc: 1 mi. below Conconully, on Salmon R. **Owner:** Charles H. Ballard and J. R. Wallace (1897). **Ore:** Gold. **Deposit:** Bench about 1 mi. square. **Assays:** 0.1¢ to 10¢ per pan. **Ref:** 63, p. 94.

Ben Holland Placer

Loc: Okanogan County. **Owner:** Ben Holland Placer Mining Co. (1905). **Ore:** Gold. **Prod:** 1905. **Ref:** 97, 1905, p. 336.

Cassimer Bar Placer (23)

Loc: At mouth of Okanogan R. **Ore:** Gold. **Prod:** Considerable production reported from 1860 to 1890. **Ref:** 12, pp. 10, 94.

Chinaman's Friend Placer

Loc: Okanogan County. **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 353.

Condon Ferry Placer

Loc: On Columbia R. **Owner:** J. N. and H. W. Payne (1939). **Ore:** Gold. **Prod:** Recovered \$100 per day in 1939. **Ref:** 108, 7/39, p. 22.

Crounse (Strawberry Creek) Placer (29)

Loc: On Strawberry Cr. in S½ sec. 35, (34-31E). **Access:** 1½ mi. N. of Park City by road. **Owner:** Harry Crounse (1913). **Ore:** Gold. **Ore min:** Free gold, magnetite, ilmenite. **Gangue:** Stream gravel. **Deposit:** Flats from 20 to 200 ft. wide along the stream are underlain by a shallow layer of coarse gravel. **Dev:** Small pits. **Assays:** 2 pans of gravel from the layer next to bedrock yielded 1¢ in Au and 1 oz. or more of black sand. **Prod:** Reportedly \$100 worth of gold. **Ref:** 122, pp. 93, 102-103.

Cuba Line Placer (7)

Loc: Sec. 1, (40-29E), Myers Cr. dist. **Ore:** Gold. **Ref:** 158.

Dan Mooney Placer (11)

Loc: Myers Cr. dist. **Ore:** Gold. **Prod:** 1925. **Ref:** 97, 1934, p. 296.

Davey Placer (10)

Loc: Myers Cr. dist. **Ore:** Gold. **Prod:** 1939. **Ref:** 97, 1940, p. 478.

Deadman Creek Placer (12)

Loc: On Deadman Cr., Myers Cr. dist. **Ore:** Gold. **Deposit:** Placers in creek bed and in bars as much as 250 ft. above the creek. **Assays:** As much as 40¢ per yd. **Ref:** 63, p. 110.

Fourth of July Creek Placer (13)

Loc: On Fourth of July Cr., Myers Cr. dist. **Ore:** Gold. **Ref:** 63, p. 110.

Funk Placer

Loc: Along Columbia R. **Ore:** Gold. **Prod:** 1939. **Ref:** 97, 1940, p. 478.

Gold Bar Placer (24)

Loc: Near Kartar, along Columbia R. **Owner:** Gold Bar Mining Co. (1939). **Ore:** Gold. **Prod:** 1934, 1939. Washing plant treated 10,045 cu. yd. in 1939. **Ref:** 97, 1935, p. 353; 1940, p. 478.

Gold Creek Placers (30)

Loc: Along Gold Cr. from the mouth of Strawberry Cr. to W. Fk. Sanpoil R. **Ore:** Gold. **Dev:** Prospect pits only. **Assays:** "Color" or two of gold per pan. **Ref:** 122, p. 103.

Gove Placer

Loc: Along Columbia R. **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 353.

Grove Placer

Loc: On Columbia R. **Ore:** Gold. **Prod:** 1939. **Ref:** 97, 1940, p. 478.

Hill Placer

Loc: On Columbia R. **Ore:** Gold. **Prod:** 1939. **Ref:** 97, 1940, p. 478.

Hopkins Placer (26)

Loc: On Columbia R. near Alameda. **Ore:** Gold. **Prod:** 1939-1940. **Ref:** 97, 1940, p. 477; 1941, p. 472.

Johnson Placer (14)

Loc: Myers Cr. dist. **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 353.

Johnson Placer (22)

Loc: On Twisp R. **Ore:** Gold. **Prod:** 1915. **Ref:** 97, 1915, p. 572.

Lucky Strike Placer

Loc: On Columbia R. **Ore:** Gold. **Prod:** 1939. **Ref:** 97, 1940, p. 478.

Mary Ann Creek Placer (18)

Loc: On Mary Ann Cr., 1 mi. S. of Chesaw. **Prop.** 14 claims. **Ore:** Gold. **Deposit:** Gold occurs from grass roots downward to bedrock. 7-in. clay seam 4 ft. above bedrock acts as false bedrock, and values are richer above the clay than elsewhere. **Prod:** \$40,000 in 1880's. **Ref:** 88, pp. 27-28. 105, no. 1, 1905, p. 15. 158.

Meadows Placer (19)

Loc: 8 mi. above Conconully, on N. Fk. of Salmon R. **Ore:** Gold. **Deposit:** Bar placer. **Assays:** 10¢ to 15¢ per yd. **Ref:** 63, p. 94.

Methow River Placers (21)

Loc: Along Methow R. **Ore:** Gold. **Ref:** 13, p. 174.

Murray Placer (25)

Loc: Sec. 11, (30-28E), Kartar area. **Owner:** Gilbert V. Murray, Okanogan, Wash. (1951). **Ore:** Gold. **Prod:** Has produced intermittently. **Ref:** 133, p. 37. 158.

Myers Creek Placer (15)

Loc: On Myers Cr. **Ore:** Gold. **Ref:** 63, p. 110.

Nespelem Bar Placer (27)

Loc: On Nespelem Bar, at and near the mouth of Nespelem R. **Access:** Road. **Prop:** 320 acres of patented land. **Ore:** Gold. **Deposit:** Terrace ½ mi. wide and 100 ft. above Columbia R. contained a thin paystreak of iron-stained sandy clay. **Assays:** Tests indicate no ground on the bar can be expected to yield as much as 0.01¢ per cu. yd. **Ref:** 26, p. 62.

Nespelem River Placers (28)

Loc: Along Nespelem R. **Ore:** Gold. **Ref:** 13, p. 174.

Nugget Placer (31)

Loc: On Strawberry Cr., Park City dist. **Ore:** Gold. **Prod:** 1926. **Ref:** 97, 1926, p. 467.

Okanogan River Placers

Loc: Along Okanogan R. **Ore:** Gold. **Ref:** 13, p. 174.

Olcott Placer (1)

Loc: Oroville dist. **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 354.

Ottia May Placer (16)

Loc: Myers Cr. dist. **Ore:** Gold. **Prod:** 1933, 1934, 1939. **Ref:** 97, 1934, p. 296; 1935, p. 353; 1940, p. 478.

Poyneer Placer

Loc: Along Columbia R. **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 353.

Rock Creek Placer

Loc: On Rock Cr. **Ore:** Gold. **Prod:** Considerable production reported about 1890. **Ref:** 12, p. 94.

Shotwell Placer (32)

Loc: NW¼ sec. 10, (29-25E), on terrace about 100 ft. above Columbia R. **Access:** Road. **Ore:** Gold. **Deposit:** Fine gold in terrace gravels covering large area. **Prod:** 1954. Small amount of gold produced as byproduct of aggregate production for Chief Joseph Dam. **Ref:** 69-A, p. 15. 158.

Similkameen Placers (2)

Loc: Along the Similkameen R. between Oroville and Nighthawk. **Access:** Road from Nighthawk or Oroville. **Ore:** Gold. **Deposit:** Gold found as flake gold, shot gold, and nuggets in the river bars and lower terraces. **Prod:** Reportedly \$500,000 in the few years following 1859. Intermittent to 1955. **Ref:** 12, pp. 6-7, 94. 13, p. 173. 54, p. 23. 154, p. 96.

Similkameen Falls Placer (6)

Loc: At Similkameen Falls. **Ore:** Gold. **Ore min:** Free gold, ilmenite, magnetite, hematite. **Assays:** A cu. yd. of gravel yielded 110 lb. of conc. which showed 1,664 lb. magnetite, 160 lb. hematite, 152 lb. ilmenite, \$31.40 gold per ton (1905). **Ref:** 38-A, pp. 1218-1219. 126, p. 15.

Slate Rock Placer (3)

Loc: Oroville dist. **Ore:** Gold. **Prod:** 1930. **Ref:** 97, 1930, p. 673.

Spoonamore Placer (17)

Loc: Myers Cr. dist. **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 353.

Strawberry Creek Placer

(see Crounse Placer)

Vancouver Placer (4)

Loc: Oroville dist. **Owner:** Vancouver Mines, Inc. (1934-1935). **Ore:** Gold. **Prod:** 1933-1934. **Ref:** 97, 1934, p. 297; 1935, p. 354.

Walker Placer (8)

Loc: Secs. 13 and 14, (40-29E), Myers Cr. dist. **Ore:** Gold.
Prod: 1930. **Ref:** 97, 1930, p. 673.

Wasco Placer (5)

Loc: Oroville dist. **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 354.

PACIFIC COUNTY**Fort Canby Placer (2)**

Loc: Mouth of Columbia R., near Fort Canby. **Ore:** Gold.
Deposit: Sand. **Assays:** 822 lb. magnetite, 240 lb. ilmenite, 81¢ gold per ton. **Ref:** 38-A, pp. 1218-1219. 126, p. 15.

Ocean Park Placer (1)

Loc: Ocean beach at Ocean Park. **Ore:** Gold. **Deposit:** Sand.
Assays: 22 lb. magnetite, 4 lb. ilmenite, 87¢ gold per ton. **Ref:** 38-A, pp. 1218-1219. 126, p. 15.

Sand Island Placer (3)

Loc: Island at mouth of Columbia R., just S. of Ilwaco. **Ore:** Gold. **Deposit:** Sand. **Assays:** 160 lb. magnetite, 68 lb. ilmenite, 2 lb. zircon, \$1.51 gold per ton. **Ref:** 38-A, pp. 1178, 1218-1219. 126, p. 15.

PEND OREILLE COUNTY**Browns Lake Placer (5)**

Loc: NW¼NE¼ sec. 24, (34-44E), at E. end of Browns Lk., Newport dist. **Access:** Road. **Owner:** Wm. Abraham and C. N. Newburn (1920). **Ore:** Gold. **Dev:** 20-ft. shaft. **Assays:** Only occasional colors. **Ref:** 139, p. 56.

Harvey Bar Placer (2)

Loc: On Pend Oreille R. in N. center sec. 26, (40-43E). **Access:** ½ mi. W. of Slate Cr. road. **Ore:** Gold. **Deposit:** Placer gravel on pockety dolomite bedrock. **Prod:** Intermittent. **Ref:** 128, p. 78.

O'Sullivan Creek Placer

(see Sullivan Creek Placer)

Schierding Placer (1)

Loc: On E. side Pend Oreille R. just below mouth of Z Canyon gorge. **Elev:** 1,900 ft. **Access:** 2½ mi. by road W. of Crescent Lk. **Prop:** 120 acres of patented land. **Owner:** William Schierding and associates, Metaline Falls, Wash. (1943). **Ore:** Gold. **Deposit:** Well-rounded river gravel, generally less than 6 in. in dia., but some boulders up to 18 in. **Improv:** Dragline scraper, revolving grizzly, a screen and waterjet, and 2 sets of sluice boxes lined with riffles and blankets, dismantled (1938). **Assays:** Small colors of flat gold with well-rounded edges. One nugget of 2 pennyweight. **Prod:** 1935. **Ref:** 29, p. 51. 128, p. 78.

Schultz Placer (4)

Loc: Near SE. cor. sec. 19, (39-43E), in draw near Schultz's cabin. **Ore:** Gold. **Deposit:** Surface gravels. **Assays:** Reportedly 50¢ to \$1.50 per yd. **Prod:** Reportedly produced about 1900. **Ref:** 158.

Sullivan (O'Sullivan) Creek Placer (3)

Loc: On Sullivan Cr. E. of Metaline Falls. **Ore:** Gold. **Assays:** Nuggets valued at \$20 each have been found. **Prod:** Reportedly several hundred thousand dollars. **Ref:** 12, pp. 8-9, 95. 13, p. 173.

PIERCE COUNTY**Morse Creek Placer (3)**

Loc: Near head of Morse Cr. **Ore:** Gold. **Ref:** 63, p. 44.

Ogren Placer (1)

Loc: Sec. 12, (17-10E), Summit dist. **Owner:** R. E. Ogren and Walter Zelepusa, Enumclaw, Wash. (1952—). **Ore:** Gold. **Ref:** 133, p. 38.

Silver Creek Placer (2)

Loc: NE¼ sec. 25, (17-10E), on headwaters of Silver Cr. **Elev:** 4,500 ft. **Access:** Road up Silver Cr. **Ore:** Gold. **Deposit:** Placer deposit from which considerable coarse gold has reportedly been recovered. **Improv:** Sluice boxes. **Assays:** Recoveries over a 10-yr. period av. \$1.25 per yd. **Prod:** About 1920 to 1930. **Ref:** 158.

SKAGIT COUNTY**Anacortes Placer (1)**

Loc: Near Anacortes. **Ore:** Gold. **Deposit:** Placer (probably beach). **Assays:** 2 samples showed 715 and 1,137 lb. chromite, 41¢ and 14¢ gold per ton. **Ref:** 38-A, pp. 1218-1219. 126.

Babe Placer

Loc: Skagit County. **Owner:** Walter E. Woodrich, Rockport, Wash. **Ore:** Gold. **Ref:** 158.

Day Creek Placer (2)

Loc: Day Cr. **Ore:** Gold. **Prod:** 1939. **Ref:** 158.

Fidalgo Island Placer

(see Fidalgo Island under chromium)

Ruby Creek Placer

Loc: Near headwaters of Ruby Cr. **Ore:** Gold. **Deposit:** First placer gold discovery west of the Cascade Mtns. **Assays:** Reportedly as high as \$28 per yd. **Ref:** 12, pp. 7-8, 94. 13, pp. 171-172. 145, p. 95.

Skagit River Placer

Loc: Along headwaters of Skagit R. **Ore:** Gold. **Ref:** 13, p. 171.

SKAMANIA COUNTY**Camp Creek Placer**

Loc: Skamania County. **Ore:** Gold. **Prod:** 1939, 1940. **Ref:** 97, 1940, p. 479; 1941, p. 475.

Hudson and Meyers Placer (1)

Loc: On McCoy Cr., probably in sec. 15, (10-8E). **Ore:** Gold. **Ref:** 158.

Meyers Placer

(see Hudson and Meyers Placer)

Texas Gulch Placer (2)

Loc: E½ sec. 25, (4-5E). **Ore:** Gold. **Ref:** 158.

SNOHOMISH COUNTY**Alder Placer (30)**

Loc: Sec. 6, (27-8E), Sultan dist. **Ore:** Gold. **Ref:** 158.

Alpha and Beta Placers (8)

Loc: SW. cor. sec. 32, SE. cor. sec. 31, (30-10E), and E½ sec. 6, (29-10E). **Elev:** 2,000 ft. **Prop:** 2 patented claims. **Owner:** Sykes estate (1943). **Ore:** Gold. **Deposit:** Sand and gravel in flat area below steep slopes at head of Williamson Cr. **Dev:** No visible pits or other digging. **Ref:** 23, p. 50.

Aristo Placer (22)

Loc: Sec. 17, (28-8E), on Sultan R. just below the mouth of Sultan R. Canyon. **Owner:** H. E. Rathje, Sultan, Wash. **Ore:** Gold. **Prod:** Small amount produced by primitive methods and small hydraulic unit. **Ref:** 14, p. 50. 23, p. 13.

Bench Placer (35)

Loc: Sec. 19, (28-11E), 800 ft. from junction of Silver Cr. with N. Fk. of Skykomish R. **Owner:** Mrs. Belle Fowler, Index, Wash. **Ore:** Gold. **Assays:** 80¢ to \$1.00 per yd. **Ref:** 158.

Bertha D. Placer (23)

Loc: Secs. 8 and 17, (28-8E), Sultan dist. **Owner:** H. E. Bonner, Everett, Wash. **Ore:** Gold. **Ref:** 158.

Beta Placer

(see Alpha and Beta Placers)

Black Hawk Placer (20)

Loc: N½ sec. 4 and 5, (28-8E), Sultan dist. **Owner:** S. T. Markel and F. L. Boyd. **Ore:** Gold. **Ref:** 158.

Blake Placer (16)

Loc: Sec. 21, (29-11E), Monte Cristo dist. **Prop:** 1 patented placer claim. **Owner:** Eric G. S. Ward, Laurel Heights, Wash. **Ore:** Gold. **Ref:** 158.

Bonnie Belle Placer (36)

Loc: Secs. 19 and 20, (28-11E), 9 mi. from Index on N. Fk. of Skykomish R., Silver Cr. dist. **Prop:** 1 patented placer claim. **Owner:** H. L. Fowler, Index, Wash. **Ore:** Gold. **Ref:** 158.

Calf Moose Placer (1)

Loc: Sec. 14, (32-8E), White Horse Mtn. area. **Prop:** 1 patented placer claim. **Owner:** Galbraith & Co., Seattle, Wash. (1910). **Ore:** Gold. **Ref:** 158.

Condor Placer (9)

Loc: Sec. 16, (29-11E), Monte Cristo dist. **Prop:** 1 patented placer claim. **Owner:** T. E. Skaggs, Everett, Wash. **Ore:** Gold. **Ref:** 158.

Cow Moose Placer (2)

Loc: Sec. 13, (32-8E), White Horse Mtn. area. **Prop:** 1 patented placer claim. **Owner:** Galbraith & Co., Seattle, Wash. **Ore:** Gold. **Ref:** 158.

Cox Placer (17)

Loc: Sec. 22, (29-11E), Monte Cristo dist. **Prop:** 1 patented placer claim. **Owner:** H. S. Ofstie, Everett, Wash. **Ore:** Gold. **Ref:** 158.

Darrington Placer (3)

Loc: NW¼ sec. 23, (32-9E), near the town of Darrington on the W. side of Sauk R. **Ore:** Gold. **Ref:** 14, p. 50.

Deer Creek Placer (4)

Loc: On Deer Cr. near Darrington. **Ore:** Gold. **Ref:** 14, p. 50.

Dixie Placer (37)

Loc: Sec. 19, (28-11E), Silver Cr. dist. **Prop:** 1 patented placer claim. **Owner:** Miller Logging Co. **Ore:** Gold. **Ref:** 158.

Double Eagle Placer (7)

Loc: Secs. 8 and 9, (30-10E), on Coal Cr. about 2 mi. NE. of Silverton. **Prop:** 8 claims. **Ore:** Gold. **Ref:** 14, p. 50.

Douglas Placer (38)

Loc: Sec. 20, (28-11E), Silver Cr. dist. **Prop:** 1 patented placer claim. **Owner:** Miller Logging Co., Index, Wash. **Ore:** Gold. **Ref:** 158.

Emerson Placer (10)

Loc: Sec. 16, (29-11E), Monte Cristo dist. **Prop:** 1 patented placer claim. **Owner:** T. E. and Lottie Skaggs, Everett, Wash. **Ore:** Gold. **Ref:** 158.

F and W Placer

Loc: Darrington dist. **Ore:** Gold. **Ref:** 104, 2/28/37, p. 28.

Franklin Placer (11)

Loc: Sec. 16, (29-11E), Monte Cristo dist. **Prop:** 1 patented placer claim. **Owner:** T. E. and Lottie Skaggs, Everett, Wash. **Ore:** Gold. **Ref:** 158.

Gold Bar Placer (33)

Loc: Secs. 6, 7, and 8, (27-9E), on Skykomish R. **Ore:** Gold. **Prod:** Small amount. **Ref:** 14, p. 50.

Granite Falls Placer (5)

Loc: NW¼ sec. 8, (30-7E), on N. side of the S. Fk. of Stila-guamish R. about 1 mi. NE. of Granite Falls. **Ore:** Gold. **Ref:** 14, pp. 50-51.

Helen Deahn Placer (24)

Loc: Secs. 8 and 17, (28-8E), Sultan dist. **Owner:** H. E. Bonner, Everett, Wash. **Ore:** Gold. **Ref:** 158.

Horseshoe Bend Placer (25)

Loc: Sec. 8, (28-8E), on Sultan R. 5 mi. N. of the town of Sultan. **Prop:** 157 acres of patented ground. **Ore:** Gold. **Ore min:** Coarse gold. **Dev:** Considerable amount of work. **Assays:** Av. values 25¢ to 40¢ per yd. **Prod:** Several thousand dollars. **Ref:** 14, p. 51. 63, p. 25.

Howard Placer (41)

Loc: NE¼ sec. 5, (27-11E), on Howard Cr. **Prop:** 1 claim. **Ore:** Gold. **Ref:** 14, p. 51.

Ida Placer (31)

Loc: Sec. 6, (27-8E), Sultan dist. **Ore:** Gold. **Ref:** 158.

Jones Placer (12)

Loc: Sec. 16, (29-11E), Monte Cristo dist. **Prop:** 1 patented placer claim. **Owner:** T. E. Skaggs, Everett, Wash. **Ore:** Gold. **Ref:** 158.

Junction Placer (13)

Loc: Sec. 16, (29-11E), Monte Cristo dist. **Prop:** 1 patented placer claim. **Owner:** T. E. Skaggs, Everett, Wash. **Ore:** Gold. **Ref:** 158.

Junction Nos. 1 to 3 Placer (18)

Loc: Sec. 22, (29-11E), Monte Cristo dist. **Prop:** 3 patented placer claims. **Owner:** J. A. Andrews, Monte Cristo, Wash. **Ore:** Gold. **Ref:** 158.

Leon Placer (39)

Loc: Sec. 20, (28-11E), Silver Cr. dist. **Prop:** 1 patented placer claim. **Owner:** Miller Logging Co., Index, Wash. **Ore:** Gold. **Ref:** 158.

Line a Little Placer (34)

Loc: NE¼ sec. 19, (27-10E), on the N. side of the N. Fk. of Skykomish R. about ½ mi. W. of Index. **Prop:** 2 claims. **Ore:** Gold. **Ref:** 14, p. 51.

Lockwood Placer (14)

Loc: Sec. 16, (29-11E), Monte Cristo dist. **Owner:** T. E. and Lottie Skaggs, Everett, Wash. **Ore:** Gold. **Ref:** 158.

McCloud Placer

(see Sultan Canyon Placer)

Merry Mixer Placer (26)

Loc: Secs. 8 and 17, (28-8E), Sultan dist. **Prop:** 1 patented placer claim. **Owner:** H. E. Bonner, Everett, Wash. **Ore:** Gold. **Ref:** 158.

Mom and Pop Placer (27)

Loc: Secs. 8 and 17, (28-8E), Sultan dist. **Prop:** 1 patented placer claim. **Owner:** H. E. Bonner, Everett, Wash. **Ore:** Gold. **Ref:** 158.

Olympic Placer (42)

Loc: Sec. 32, (27-12E), on Beckler R. **Ore:** Gold. **Ref:** 158.

Orient Placer (15)

Loc: Sec. 16, (29-11E), Monte Cristo dist. **Prop:** 1 patented placer claim. **Owner:** T. E. and Lottie Skaggs, Everett, Wash. **Ore:** Gold. **Ref:** 158.

Peterson Placer (6)

Loc: Near center sec. 9, (30-7E), on Stilaguamish R. **Prop:** Placer claim. **Owner:** Ed Peterson, East Stanwood, Wash. (1934). **Ore:** Gold. **Deposit:** Gold-bearing gravels being cyanided here in 1934. **Ref:** 158.

Phoenix Placer (40)

Loc: NW¼ sec. 29, (28-11E), on Howard Cr. **Prop:** 1 claim. **Ore:** Gold. **Ref:** 14, p. 51.

Pork Barrel Placer (28)

Loc: Secs. 8 and 17, (28-8E), Sultan dist. **Owner:** H. E. Bonner, Everett, Wash. **Ore:** Gold. **Ref:** 158.

Sailors Bar Placer

Loc: On Sultan R. **Ore:** Gold. **Prod:** \$6,000. **Ref:** 14, p. 51. 63, p. 25.

Shirley Placer

Loc: On the N. Fk. of Skykomish R. near Galena. **Ore:** Gold. **Prod:** Small amount in 1934. **Ref:** 14, p. 51. 97, 1935, p. 354.

Stilaguamish River Placers

Loc: Along Stilaguamish R. **Ore:** Gold. **Assays:** Said to have been some rich placer deposits. **Ref:** 13, p. 172. 14, p. 51.

Sultan Placer (32)

Loc: NW¼ sec. 5, (27-8E), on Skykomish R., S. of the town of Sultan. **Ore:** Gold. **Prod:** \$200 up to 1934, \$1,408 during 1934. **Ref:** 14, p. 51.

Sultan Canyon (McCloud) Placer (19)

Loc: SE¼SE¼ sec. 32, (29-8E) and NE¼ sec. 5, (28-8E). **Access:** Road. **Owner:** Frank Morgan, Falls City, Wash. (1952). **Ore:** Gold. **Prod:** 1951. **Ref:** 133, p. 39.

Sultan River Placer (29)

Loc: On Sultan R. at W. edge of the town of Sultan, probably in sec. 31, (28-8E). **Ore:** Gold. **Improv:** Suction-dredge operation. **Prod:** Some production in 1947. **Ref:** 158.

Sultan River Placers

Loc: Along Sultan R. from its source to its mouth. **Ore:** Gold. **Assays:** Av. yield said to be 40¢ to 85¢ per yd. **Ref:** 12, p. 95. 13, p. 172. 63, pp. 25-26.

Young Placer

Loc: Near Sultan. **Prop:** 7 claims. **Owner:** Frank A. Young, Sultan, Wash. **Ore:** Gold. **Ref:** 14, p. 51.

Yreka Placer (21)

Loc: Sec. 5, (28-8E), Sultan dist. **Ore:** Gold. **Ref:** 158.

TEVENS COUNTY**Anderson Placer**

Loc: Northport dist. **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 354.

B and W Placer

Loc: Columbia R. **Owner:** K. E. Boissoneau (1940). **Ore:** Gold. **Prod:** 1938-1940. **Ref:** 97, 1939, p. 491.

Blue Bar Placer (19)

Loc: Sec. 20, (31-37E), Kettle Falls dist. **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 354.

Bossburg Bar Placer (11)

Loc: Sec. 25, (38-37E), on W. bank of Columbia R. **Owner:** Federal Land Bank (1934). **Ore:** Gold. **Deposit:** Large bench or high bar which had 30,000 cu. yd. of gravel av. 25¢ per yd. **Ref:** 158.

Brod-Hurst Placer (14)

Loc: Marcus dist. **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 354. 104, 6/30/35, p. 22.

China Bend Placer (9)

Loc: Lots 3 and 4, sec. 7, (38-38E), on SE. bank of Columbia R. **Ore:** Gold. **Assays:** 8 samples showed 8.7¢ to 32.5¢ per cu. yd. **Ref:** 158.

Collins Placer (18)

Loc: Along Columbia R., 2½ mi. from Daisy. **Owner:** J. H. Collins, Colville, Wash. (1938). **Ore:** Gold. **Assays:** Av. 20¢ per yd. **Prod:** Owner grossed about \$200 daily from 1,000 cu. yd. of gravel in 1938. **Ref:** 97, 1939, p. 491. 113, 6/16/38.

Colville River Placer

Loc: Along Colville R. **Ore:** Gold. **Ref:** 13, p. 174.

Dead Man's Eddy Placer

(see Nigger Creek Bar Placer)

Evans Placer (3)

Loc: Northport to international boundary. Camp on W. bank of the reservoir just N. of Northport. **Prop:** Placer lease on 5 mi. of shoreline on the Columbia R. reservoir. **Owner:** Ray Evans, Northport, Wash. (1941). **Ore:** Gold. **Improv:** 2 buildings, a shop, and a steam power suction dredge (1941). **Assays:** Said to range from 10¢ to \$35.00 per yd. **Prod:** Presumably produced prior to 1941. **Ref:** 30, p. 103.

Gibson Bar Placer (21)

Loc: Secs. 10 and 15, (29-35E), at Gibson Bar, on E. side of Columbia R. **Owner:** Harvey R. Cline Co. (1940). **Ore:** Gold. **Deposit:** Gravel av. 4 ft. thick covering about 100 acres. **Assays:** 13 test holes av. 14.3¢ per cu. yd. **Prod:** 1938-1940; mined in early days by Chinese. **Ref:** 97, 1939, p. 491; 1940, p. 479; 1941, p. 475. 158.

Grover Placer

Loc: On Columbia R. **Ore:** Gold. **Prod:** 1938-1939. **Ref:** 97, 1939, p. 491; 1940, p. 479.

Holsten Placer (17)

Loc: Sec. 29, (35-37E), on E. bank of Columbia R., 6 mi. below Kettle Falls. **Owner:** Mr. Holsten (1934). **Ore:** Gold. **Ore min:** Free gold. **Assays:** Small production in 1934 on gravels running 26¢ to 30¢ per cu. yd. **Ref:** 158.

Hurst Placer

(see Brod-Hurst Placer)

La Dow Placer (20)

Loc: Along Columbia R., near Hunters. **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 354.

McGrath Placer

Loc: Along Columbia R., Northport dist. **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 354.

Marcus Placer (15)

Loc: At Marcus. **Ore:** Gold. **Deposit:** River sand. **Assays:** 1,096 lb. magnetite, 56 lb. ilmenite, \$12.61 gold per ton from a 5-lb. conc. from 1 yd. of gravel. **Ref:** 38-A, pp. 1218-1219. 126, p. 15.

Meyers Falls Placer (16)

Loc: Sec. 30, (36-38E), Meyers Falls dist. **Ore:** Gold. **Ref:** 158.

Nigger Bar Placer (2)

Loc: Secs. 14 and 21, (40-41E), 2 mi. S. of Canadian boundary, on W. side of Columbia R. **Ore:** Gold. **Deposit:** Bar 300 ft. wide and more than 1 mi. long is covered by a 2-ft. overburden of sand and large boulders. **Assays:** A 125-ft. strip 1,000 ft. long had 2½ ft. of gravel av. 26¢ per cu. yd. **Ref:** 158.

Nigger Creek Bar (Dead Man's Eddy) Placer (5)

Loc: Sec. 28, (40-40E), at mouth of Nigger Cr., on W. bank of Columbia R. **Owner:** Roberts Leasing Co. (1933-1934). **Ore:** Gold. **Deposit:** Large low bar, with no large boulders. **Assays:** Av. 27.9¢ per cu. yd. **Prod:** 1933-1934. **Ref:** 97, 1934, p. 297; 1935, p. 355. 158.

Ninemile Bar Placer (10)

Loc: Sec. 15, (38-38E), on E. bank of Columbia R. **Owner:** State (1934). **Ore:** Gold. **Ore min:** Free gold. **Assays:** 8 tests showed 2.6¢ to \$1.18 per cu. yd. **Ref:** 158.

No Bear Placer (1)

Loc: Secs. 4 and 9, (40-40E), Northport dist. **Ore:** Gold. **Ref:** 158.

Nobles Placer (7)

Loc: Secs. 29 and 32, (39-39E), near Evans. **Owner:** Nobles, Inc. (1934). **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 354.

Northport Bar Placer (6)

Loc: Sec. 36, (40-39E), on W. bank of Columbia R. opposite Northport. **Ore:** Gold. **Ore min:** Free gold. **Assays:** 7 test pits showed an av. of 2 ft. of gravel which ran 20.1¢ per cu. yd. **Ref:** 158.

Orient Placer (8)

Loc: Sec. 23, (39-37E), Orient dist. **Ore:** Gold. **Ref:** 158.

Pohle Placer

Loc: Along Columbia R., Northport dist. **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 354.

Reed and Roberts Placer (4)

Loc: Sec. 20, (40-40E), about 1 mi. W. of Columbia R. **Owner:** Indian Department leasing to Messrs. Reed and Roberts (1934). **Ore:** Gold. **Deposit:** High bench. **Prod:** \$17,500 reported from less than 2 acres of gravel 3 ft. deep in 1934. **Ref:** 158.

Roberts Placer

(see Reed and Roberts Placer)

Sandoz Placer (13)

Loc: Sec. 22, (37-38E), 5 mi. S. of Bossburg. **Owner:** F. W. Sandoz, Bossburg, Wash. **Ore:** Gold. **Ref:** 158.

Valbush Bar Placer (12)

Loc: Secs. 16 and 21, (37-38E), on E. side of Columbia R. between Marcus and Bossburg. **Owner:** State, leasing to Messrs. Billings, Nobel, Brod, Price, Raymond, and Foster (1934). **Ore:** Gold. **Assays:** 25,000 cu. yd. produced in 1934 yielded an av. of 21.4¢ per yd. Another operator on the same bar recovered \$3,486.00 from 16,000 cu. yd. in 1934. **Prod:** 1934, 1939, 1940. **Ref:** 97, 1940, p. 479; 1941, p. 475. 158.

Van Stone Placer

Loc: Along Columbia R., Northport dist. **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 354.

Weston Placer

Loc: Along Columbia R., Northport dist. **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 354.

WHATCOM COUNTY**Alice Mae Placer (7)**

Loc: Secs. 11 and 12, (37-14E), on Ruby Cr., 1¼ mi. W. of Beebe Ranger Station. **Ore:** Gold. **Ref:** 158.

Bellingham Placer

(see under iron)

Combination Placer (6)

Loc: Sec. 2, (37-17E), Slate Cr. dist. **Prop:** 1 patented claim. **Owner:** Reuben Pierson, Seattle, Wash. (1952). **Ore:** Gold. **Ref:** 158.

Donald A Placer

Loc: Slate Cr. dist. **Ore:** Gold. **Prod:** 1915. **Ref:** 158.

Eureka Placer

Loc: Slate Cr. dist. **Prop:** 2 placer claims. **Owner:** Eureka Gold Mining Co., Wenatchee, Wash. (1938). **Ore:** Gold. **Ref:** 158.

Farrar Placer (12)

Loc: On Ruby Cr. between Lime and Darlington Creeks. Approx. in sec. 36, (38-16E). **Access:** Road. **Prop:** Several claims along a 2-mi. stretch of Ruby Cr. **Owner:** Mrs. John Farrar (1948). **Ore:** Gold. **Prod:** Several hundred dollars per year up to 1948. **Ref:** 158.

Grizzly Placer (14)

Loc: Sec. 3, (37-17E), Slate Cr. dist. **Owner:** R. E. Johnson. **Ore:** Gold. **Ref:** 158.

Hope Placer (1)

Loc: Sec. 18, (39-5E), on Bill Cr. **Ore:** Gold. **Ref:** 158.

Jackass Placer (4)

Loc: Sec. 10, (37-14E), ½ mi. below junction of Cut Out Cr. and Granite Cr. **Prop:** 1 claim. **Owner:** Ralph E. Pride, Bellingham, Wash. (1952). **Ore:** Gold. **Ref:** 158.

Johnnie S. Placer (10)

Loc: Sec. 17, (37-16E), at mouth of Granite Cr., Slate Cr. dist. **Prop:** 1 claim. **Owner:** Morley Bouck, Rockport, Wash. (1952). **Ore:** Gold. **Ref:** 158.

Lazy Tar Heel Placer (8)

Loc: Secs. 10, 11, and 12, (37-14E), Ruby Cr. dist. **Owner:** Walt Woodrich, Sedro Woolley, Wash. (1939). **Ore:** Gold. **Prod:** 1939. **Ref:** 158.

New Light Placer (13)

Loc: Sec. 31, (38-17E). **Ore:** Gold. **Ref:** 158.

Nip and Tuck (Tanya) Placer (9)

Loc: Sec. 11, (37-14E), Slate Cr. dist., about 5 mi. S. of Ruby Cr. **Prop:** 5 placer claims (1952). **Owner:** F. A. Weihe, Bellingham, Wash. (1952). Tommy Rowland (1893-1894). R. E. Johnson, Winthrop, Wash. (1942). **Ore:** Gold. **Assays:** 50¢ per yd. **Ref:** 158.

Normandy Placer

Loc: On Slate Cr. above mouth of Canyon Cr. **Prop:** 1 placer claim. **Owner:** E. C. Fisher, Marblemount, Wash. (1952). **Ore:** Gold. **Ref:** 158.

Old Discovery Placer (11)

Loc: On Ruby Cr. about 2 mi. above its confluence with Granite Cr. Probably SE¼ sec. 9, (37-16E). **Ore:** Gold. **Deposit:** Placer gold is found in old stream channels well above present stream level. **Prod:** Several thousand dollars in "old days." **Ref:** 63, p. 58. 158.

Park Placer

Loc: Slate Cr. dist. **Prop:** 1 placer claim. **Owner:** James Yelton, Bellingham, Wash. (1952). **Ore:** Gold. **Ref:** 158.

Rose Placer (2)

Loc: On headwaters of S. Fk. Nooksack R. **Prop:** 1 placer claim. **Owner:** J. W. Erlandson, Mount Vernon, Wash. (1952). **Ore:** Gold. **Ref:** 158.

Ruby Creek Placer (15)

Loc: Sec. 3, (37-17E), Slate Cr. dist. **Owner:** Granite Creek Mining Co. (1906-1909). **Ore:** Gold. **Prod:** 1906, 1908. **Ref:** 63, p. 58. 97, 1906, p. 368; 1908, p. 582. 114, no. 5, 1909, p. 91.

Scougale Placer (3)

Loc: Sec. 36, (38-13E), Slate Cr. dist. **Ore:** Gold. **Prod:** \$950 taken out in 6 weeks in 1897. **Ref:** 63, p. 58.

Tanya Placer

(see Nip and Tuck Placer)

Washington Placer

Loc: Slate Cr. dist. **Ore:** Gold. **Prod:** 1915. **Ref:** 158.

Woodrich Placer (5)

Loc: Approx. in sec. 25, (37-14E), 2 mi. up Canyon Cr. from Beebe's cabin on Granite Cr. **Access:** About 5 mi. by trail from the Ruby Cr. road. **Ore:** Gold. **Deposit:** An old gravel bar, 300 ft. long and 5 to 20 ft. thick, from which at least 2 nuggets valued at \$30 to \$40 each were taken. **Ref:** 158.

Properties—Iron is exceeded in abundance in the earth's crust only by silicon and aluminum. Pure iron is a silver-white, moderately hard, ductile malleable magnetic metal that is capable of taking a high polish. Commercial iron usually contains some carbon, phosphorus, silicon, sulfur, and manganese. Pig iron contains about 2 percent carbon and is hard and brittle and has a fairly high melting temperature. Wrought iron contains only a few tenths of a percent or less of carbon and is tough, malleable, grayish white, and is difficultly fusible. The electrical conductivity of iron is about one-seventh that of copper. Much of the metal's usefulness stems from the great variation in physical properties which can be produced by tempering, annealing, working, and by adding various quantities of other elements. Iron is stable in dry air but oxidizes readily in moist air or water, forming rust. In its chemical reactions it exhibits valences of 2 and 3 and forms ferrous and ferric compounds. Other properties are given in the table on page 12.

Uses—Iron is the cheapest, most abundant, and most versatile of metals. To list all the uses of iron and steel would require a detailed description of modern civilization and industry. Iron salts are used in dyes, inks, polishing powder, in the textile industry, and in many other applications. Iron ore is used primarily in the manufacture of pig iron, some of which is used to make cast iron, wrought iron, but most of which is converted to steel. However, iron ores are put to a number of other uses, such as, although not quantitatively important nationally, the use of considerable interest to possible iron-ore producers in Washington. Iron ore has been used in making magnesite refractories, for ballasting ships, for heavy concrete aggregate, for shielding atomic reactors, in making

WHITMAN COUNTY

Indian Bar Placer (1)

Loc: Sec. 15, (14-41E), near Penawawa. **Ore:** Gold. **Prod:** 1934. **Ref:** 97, 1935, p. 356.

YAKIMA COUNTY

Elizabeth Placer (1)

Loc: Secs. 4 and 5, (17-11E), Summit dist. **Owner:** Gold Links Mining Co. (1939). **Ore:** Gold. **Ref:** 158.

Gold Hill Placer (3)

Loc: Sec. 35, (17-11E), Morse Cr. area. **Ore:** Gold. **Prod:** 1933, 1934. **Ref:** 97, 1934, p. 298; 1935, p. 356.

Gold Links Placer (2)

Loc: Secs. 4 and 5, (17-11E), Summit dist. **Prop:** 3 placer claims. 20 lode claims. **Owner:** Gold Links Mining Co. (1939). **Ore:** Gold. **Ref:** 158.

Morse Creek Placer

Loc: Near head of Morse Cr., Summit dist. **Owner:** H. L. Tucker and George Gibbs, Yakima, Wash. (1880-1882). **Ore:** Gold. **Deposit:** An \$80 nugget was found, and \$1 nuggets were not uncommon. **Assays:** Early operators made "good wages." **Ref:** 63, p. 44.

Surveyors Creek Placer (4)

Loc: Sec. 14, (8-12E), on Klickitat R. **Ore:** Gold. **Ref:** 158.

IRON

special portland cements, in ferroalloys, and in mineral pigments such as ochre, umber, and sienna. Washington ores have been used for all these purposes. Other uses are as a heavy medium in sink-float ore-concentrating plants, in the manufacture and purification of heating gas, and as a flux in smelting ores of other metals.

Production—Iron accounts for more than 90 percent of the total production tonnage of the 30 or so metallic elements used industrially. The ore was produced in 17 states in 1950. About 80 percent of the ore produced in that year came from the Lake Superior region, and only about 6 percent came from the western states, most of it from Utah and California. There were 247 producing mines in the country, 38 of which each mined over one million tons of ore in that year. Three of the largest western steel plants were located at Provo, Utah; Fontana, California; and Pueblo, Colorado. Much smaller plants in Seattle and elsewhere in Washington have used small tonnages of iron ore. Pig iron was first made in this state at Irondale, near Port Townsend, in 1881. By the end of 1889 this plant had turned out 24,806 tons of iron. Production continued irregularly for a few more years, and during these later stages of activity (1902-1903, 1907-1910, and 1917-1919) the plant is reported to have produced 41,000 tons of pig iron. Iron ore production in Washington has never been large and has been intermittent, but during the years from 1918 through 1944 there were only 4 years in which there was no production. Total production has amounted to about 100,000 tons, and the maximum output for any one year has been about 14,000 tons.

Prices—Iron is the cheapest of the metals. The average value of all grades of pig iron f.o.b. blast furnaces in 1950

was \$42.85 per ton. The average price for finished steel was nearly double this figure, rising from 2.396 cents per pound in 1943 to 3.862 cents in 1950. The average value per gross ton of Lake Superior iron ore f.o.b. mines was \$4.90 in 1950, compared with \$4.50 in 1949, \$3.91 in 1948, and a range of from \$4.45 to \$5.50 in the years 1929 to 1941. The average values of iron ores produced in Washington have been considerably higher than these figures, perhaps twice as high, and the sale price, here, may vary within rather wide limits, subject to negotiation for each individual sales contract.

Ore minerals—Iron is a normal constituent of hundreds of minerals, and is one of the most abundant elements of the earth's crust, yet few minerals are capable of serving as ores of iron, since few contain the metal in sufficient quantities or in the right combination to make extraction profitable. The chief ore minerals in order of their importance are: hematite, Fe_2O_3 , containing 70.0 percent iron; magnetite, Fe_3O_4 , containing 72.4 percent iron; limonite, a hydrous iron oxide of variable composition and containing 59 to 63 percent iron; and siderite, FeCO_3 , containing 48.2 percent iron. The sulfides pyrite and pyrrhotite are ordinarily considered to be ores of sulfur, but they contain 46.6 and 61.6 percent iron respectively, and the sinter that remains after roasting to

recover the sulfur is sometimes marketable as iron ore. The best grades of iron ore, as mined, contain 48 to 68 percent iron, with a minimum of silicon, titanium, phosphorus, calcium, aluminum, and sulfur. Specifications regarding impurities vary considerably, but phosphorus should not exceed 0.045 percent and sulfur 0.25 percent; nevertheless, acceptable ore may in some instances contain as much as 0.18 percent phosphorus and 0.20 percent sulfur.

Geology—Iron-ore deposits are of various origins, including segregations of magnetite and titaniferous magnetite in igneous rocks; contact-metamorphic deposits of magnetite and specularite; replacement deposits of hematite; sedimentary deposits of hematite, limonite, and siderite; residual or lateritic deposits of hematite and limonite; oxidation or gossan deposits of limonite; and placer deposits of magnetite sands. Ores occurring in any of these types of deposits may have been subjected to metamorphism subsequent to their origin. Each of these types of origin is represented by Washington iron-ore deposits. Of interest but no economic importance is the occurrence of metallic iron as small masses and grains disseminated in basalt penetrated by a well drilled in a search for gas and oil in Grant County.

OCCURRENCES

The map showing the numbered iron occurrences is plate 11, on page 31 in volume 2.

ASOTIN COUNTY

Clarkston Placer (1)

(see under gold, placer)

Snake River Placer

(see under gold, placer)

CHELAN COUNTY

Blewett (Washington Nickel) (3)

Loc: Secs. 13 and 14, (22-17E), on a prominent ridge N. of Shaser Cr. at its junction with Peshastin Cr. **Elev:** 2,900 to 4,080 ft. **Access:** E. end of property is on highway U. S. 97, and W. end is accessible by a short private road. **Prop:** 11 claims, including: Iron King, McCarthy, Magnetite No. 1, Rothert. **Owner:** Washington Nickel Mining & Alloys, Inc., Seattle, Wash. (1944). **Ore:** Iron, nickel, chromium. **Ore min:** Hematite, magnetite, chromite, nickel silicates. **Gangue:** Shale. **Deposit:** Sedimentary beds, high in iron and carrying appreciable quantities of nickel and chromium, lying stratigraphically between Eocene Swauk sandstone and conglomerate and pre-Eocene serpentinized peridotite. **Dev:** Several caved adits and numerous pits. Mapped topographically and geologically. Magnetic survey made by Wash. Division of Geology in 1942 and 1943. Drilled (10 holes totaling 2,395 ft.) and sampled by the U. S. Bureau of Mines, and tested metallurgically by the Bailey Furnace Co. **Assays:** U. S. Bureau of Mines testing showed 46,000 tons assaying 0.88% Ni, 2.5% Cr_2O_3 , 32% Fe, and 8,000,000 tons assaying 0.39% Ni, 0.85% Cr_2O_3 , 11.53% Fe. **Ref:** 16, 17, pp. 15-16. 48, pp. 3-5. 67, p. 19. 78, pp. 29, 31. 84,

86, pp. 87-101. 90, 95, p. 6. 111, p. 7. 142, pp. 70-72. 158. 161, p. 49. 179, pp. 77-82.

Davenport

(see Nigger Creek)

First Creek (1)

(see under titanium)

Iron King

(see Rothert)

Nigger Creek (Davenport) (2)

Loc: $\text{S}\frac{1}{2}\text{SW}\frac{1}{4}$ and $\text{N}\frac{1}{2}\text{SE}\frac{1}{4}$ sec. 7 and $\text{NW}\frac{1}{4}\text{SW}\frac{1}{4}$ sec. 8, (22-17E) and $\text{SE}\frac{1}{4}\text{SE}\frac{1}{4}$ sec. 12, (22-16E). **Elev:** 4,100 to 4,800 ft. **Access:** 4 mi. of road and 2 mi. of trail up Nigger Cr. from its mouth. **Prop:** 4 claims. **Owner:** C. P. Davenport, Auburn, Wash., and others (1944). **Ore:** Iron, chromium, nickel. **Ore min:** Hematite, magnetite. **Gangue:** Shale. **Deposit:** Sedimentary iron beds exposed in 3 areas contain 59,850 tons of exposed, 45,720 tons of probable, and 435,850 tons of possible ore. **Dev:** 75-ft. adit and several old open cuts. **Ref:** 17, pp. 16-20. 67, p. 15. 90.

Rothert (Iron King) (4)

Loc: Sec. 13, (22-17E), Blewett dist. **Ore:** Iron. **Ref:** 142, p. 70-71.

Washington Nickel

(see Blewett)

CLALLAM COUNTY

Cedar Creek Placer (3)

(see under gold, placer)

Lovelace Placer

(see Shi Shi Beach Placer under gold, placer)

Shi Shi Beach Placer (1)

(see under gold, placer)

Starbuck Placer

(see Cedar Creek Placer under gold, placer)

Yellow Banks Placer (2)

(see under gold, placer)

LARK COUNTY**Bokemier**

(see Howland Acres)

Brush Prairie Placer (2)

(see under gold, placer)

Camas Placer (5)

(see under titanium)

Canyon Creek Placer

Loc: Canyon Cr. **Ore:** Iron. **Ore min:** Magnetite, hematite. **Gangue:** Quartz. **Assays:** One sample showed 1,726 lb. magnetite, 200 lb. hematite, 74 lb. quartz per ton. **Ref:** 38-A, pp. 1218-1219. 126, p. 14.

Howland Acres (Bokemier) (3)

Loc: E½SW¼ sec. 5, (2-2E), ½ mi. S. and ¼ mi. E. of Barberton. **Elev:** 200 ft. **Access:** 1 mi. by road from railroad. **Owner:** A. H. Bokemier, Vancouver, Wash. (1945). **Ore:** Iron. **Ore min:** Limonite. **Deposit:** Surface deposit (covered by 6 to 18 in. of soil) of bog iron covering an exposed area 12 by 24 ft. is said to be as much as 20 ft. deep. Deposit consists of spongy limonite contaminated by included sand. Float and small outcrops in an area of 30 to 50 acres, but ore is not continuous over this whole area. **Assays:** Two analyses, each representing only 2-ft. thickness of ore, showed 10.7%, 10.9% ignition loss; 14.3%, 23.6% SiO₂; 0.4%, 0.2% TiO₂; 30.4%, 42.6% Fe; 5.5%, 9.2% Mn₂O₃; 1.81%, 2.52% P₂O₅. **Ref:** 157. 158.

McMunn Placer (1)

(see under gold, placer)

Washougal (4)

Loc: SE¼NE¼ sec. 25, (2-3E), on Miller farm near Little Washougal R. **Access:** 400 ft. E. of the highway. **Ore:** Iron. **Ore min:** Magnetite. **Deposit:** Black sand reportedly 43 ft. thick was encountered in a well at a depth of 97 ft. **Ref:** 158.

WLITZ COUNTY**Ayers (1)**

Loc: About halfway between Ryderwood and Castle Rock. **Owner:** G. L. Ayers, Rt. 4, Box 407, Olympia, Wash. **Ore:** Iron. **Deposit:** Bog ore. **Assays:** 86% Fe₂O₃. **Ref:** 158.

UGLAS COUNTY**Columbia River Placer**

(see under gold, placer)

RRY COUNTY**Belcher (11)**

(see under copper)

Belcher (Blue Bell-Belcher) (9)

Loc: NW¼ sec. 8, (37-34E), Belcher dist. **Elev:** 4,050 to 4,500 ft. **Access:** On Lambert Cr. about 14 mi. by road NE. of

Republic. 8 mi. from railroad. **Owner:** Belcher Mining Co. (1909-1922). Belcher Mountain Gold and Copper Co. (1907). Blue Bell-Belcher Mining Co. (1918). **Ore:** Iron, copper, gold. **Ore min:** Pyrite, magnetite, pyrrhotite, chalcopyrite. **Gangue:** Garnet, tremolite, epidote. **Deposit:** Two or three irregular replacement bodies in limestone in a contact-metamorphosed series of limestone and shales cut by monzonite dikes. Iron sulfides more abundant than magnetite. **Dev:** 3 adits and shaft aggregate about 4,000 ft. of development. **Assays:** \$0.40 to \$1.00 Au, 4% Cu in lower workings. Trail smelter said to have bought the sulfide ore for \$4, and Granby bought large quantities at \$2.50 per ton. **Prod:** Considerable production 1909-1911, 1913-1917. **Ref:** 7, pp. 175-179. 48, p. 6. 91, p. 249. 97, 1910-1918. 98, 1918, 1920, 1922. 112, 1918, p. 168. 114, no. 6, 1906, p. 79; no. 1, 1907, p. 3; no. 5, 1909, p. 71. 116, no. 10, 1907, p. 19. 142, pp. 59-61.

Blue Bell-Belcher

(see Belcher)

Boysds

Loc: In Deadman Cr. area near Boyds. **Ore:** Iron. **Ref:** 48, p. 6. 158.

Copper Key (8)

(see under copper)

Curlew Lake

Loc: 1½ mi. from Curlew Lk. **Ore:** Iron. **Ore min:** Hematite. **Ref:** 48, p. 6. 105, vol. 87, no. 1, 1903, p. 13.

Hawkeye (5)

(see under gold)

Iron Chief (7)

Loc: Adjoins Lamefoot on S. Probably in N½ sec. 9, (37-33E). **Ore:** Iron. **Deposit:** Minor surface work discloses a replacement ore body in limestone. **Ref:** 157.

Kelly Camp (1)

(see under tungsten)

Lambert Creek (6)

Loc: Sec. 6, (37-34E). **Ore:** Iron. **Ref:** 48, p. 6.

Lamefoot (3)

Loc: ¾ mi. E. of Curlew Lk., ¼ mi. from State Highway 10, about 10 mi. NE. of Republic, and 5 mi. W. of the Belcher mine. Probably near center sec. 4, (37-33E). **Ore:** Iron, silver, gold. **Ore min:** Pyrite. **Deposit:** Replacement body in limestone, cut by several dikes. **Dev:** 90-ft. shaft all in ore. An adit discloses 90 ft. of ore where it cuts the ore at 150-ft. depth. Outcrops indicate large ore body. Diamond drill holes. **Ref:** 157.

Oversight (10)

(see also Pin Money under gold)

Loc: Near center E½ sec. 18, (37-34E), on SE. side of Cooke Mtn., Belcher dist. **Elev:** 4,650 ft. **Access:** 13 mi. by road from railroad at Republic. **Prop:** 4 claims: Pin Money, Oversight, Granite, Wander. **Owner:** Oversight Mining & Milling Co. (1906-1918). **Ore:** Iron, copper, gold. **Ore min:** Pyrite, pyrrhotite, magnetite, chalcopyrite. **Deposit:** Ore minerals occur in a lenticular body replacing limestone. Some ore nearly pure magnetite. **Dev:** Surface cuts, short adits, and shafts. **Assays:** Av. of 3 samples showed 50.2% Fe, tr. Cu, 13.3% SiO₂, 14.2% S, 0.09 oz. Au. One sample showed 26.97% Fe, 14.71% CaO, 12.91% MgO, 8.90% S, 0.164% P₂O₅, nil As. **Prod:** 1934. **Ref:** 7, pp. 170-173. 33, 1907, p. 904. 48, pp. 5-6. 97, 1935, p. 352. 98, vol. 13, p. 118. 105, 1906, p. 313; 1907, p. 264. 114, no. 1, 1907, p. 3; no. 5, 1909. 116, no. 2, 1908, p. 30; no. 5, 1908, p. 117. 142, p. 59. 157.

Wilmont Bar Placer (12)

(see under gold, placer)

Winnipeg (4)

(see under gold)

Wiseman (2)

Loc: Sec. 4, (37-33E), N. of Lamefoot mine. **Access:** Near Republic-Curlew highway. **Prop:** Several claims. **Owner:** Joe Wiseman, Republic, Wash. (1943). **Ore:** Iron. **Ore min:** Magnetite. **Deposit:** Similar to Belcher deposit. **Dev:** Surface cuts. **Ref:** 158.

Yaki

(see Winnipeg under gold)

GARFIELD COUNTY**Pomeroy Placer**

(see under gold, placer)

GRAYS HARBOR COUNTY**Dennis**

(see Elma)

Elma (Dennis) (1)

Loc: S½SE¼ sec. 28, (18-5W), 3½ mi. from railroad at Elma. **Access:** Road S. from McCleary. **Owner:** Mr. Thomas, Seattle, Wash. (1942). **Ore:** Iron, titanium. **Ore min:** Ilmenite, magnetite. **Deposit:** A 1- to 4-ft. bed of stratified, in part consolidated black sand is 2 or 3 acres in extent and covered by 3 to 8 ft. of overburden. Known tonnage 5,000. **Dev:** Several open cuts and pits. **Assays:** 50.02% Fe, 0.80% SiO₂, 0.18% P₂O₅, 0.062% S, 22.23% TiO₂. **Prod:** 1 carload and a 1,000-lb. lot were shipped for experimental purposes. **Ref:** 48, p. 7. 142, pp. 107-109. 158.

JEFFERSON COUNTY**Black Hump (3)**

(see under manganese)

Chimacum Valley (1)

Loc: In Chimacum Valley S. of Irondale. **Ore:** Iron. **Ore min:** Limonite. **Deposit:** Bog ore of rather poor quality and limited extent. **Assays:** 53.67% Fe. **Prod:** An attempt was made to use this ore in the furnace at Irondale in 1880. **Ref:** 48, p. 7. 140, pp. 5, 10.

Mount Claywood (2)

(see under manganese)

North Pole Quartz (4)

(see under manganese)

KING COUNTY**Anderson (Baring) (1)**

Loc: S½ sec. 10 and near SE. cor. sec. 11, (26-10E), 1 mi. from railroad at Baring. **Elev:** 1,200 ft. **Access:** 1 mi. by road S. of Baring, thence by trail ½ mi. **Prop:** 2 claims and 80 acres of deeded land. **Owner:** Theodore Anderson, Everett, Wash. (1943). **Ore:** Iron, lead, zinc, silver, gold, copper. **Ore min:** Magnetite. **Gangue:** Amphibole. **Deposit:** Ore body in limy quartzite is presumably a contact-replacement deposit. Exposure is a lenticular mass 25 to 30 ft. in height and 15 ft. in width. Known tonnage 2,000. **Dev:** 2 open cuts and a caved adit said to be 175 ft. long. **Assays:** 35.00% to 60.70% Fe, 9.51% to 10.20% SiO₂, 0.75% Al₂O₃, 4.53% CaO, 1.15% MgO, 0.65% P,

0.09% S, tr. to 0.94% TiO₂. **Prod:** 1 carload said to have been shipped. **Ref:** 48, p. 9. 141, p. 66. 142, pp. 92-93. 158.

Baring

(see Anderson)

Chair Peak

(see Kelley)

Chief

Loc: King County. **Prop:** 1 patented claim. **Owner:** James Taylor, Seattle, Wash. **Ore:** Iron. **Ref:** 158.

Cliff (7)

Loc: Sec. 7, (22-11E), Gold Cr. dist. **Ore:** Iron. **Prod:** Amount not known. **Ref:** 58, p. 14.

Climax (8)

Loc: Sec. 7, (22-11E), Gold Cr. dist. **Ore:** Iron. **Ref:** 58, p. 14.

Denny (6)

Loc: Sec. 6, (22-11E) and sec. 31, (23-11E), 2 mi. NW. of Snoqualmie Pass. **Elev:** 3,500 ft. **Prop:** 9 patented claims. **Ore:** Iron. **Ore min:** Magnetite, pyrite. **Gangue:** Garnet, quartz, actinolite, calcite. **Deposit:** Ore occurs as ovoid lenses, 20 ft. or more across, in a contact metamorphic deposit between limestone and intrusive granodiorite. Known tonnage 5,000. **Dev:** 53-ft. adit, open cuts and pits. **Assays:** 55.48% to 68.54% Fe, 1.89% to 7.99% SiO₂, 0.021% P, 0.089% to 0.25% S. (analyses from 3 fairly representative samples). **Ref:** 13, p. 42. 48, p. 8. 63, p. 41. 111, p. 7. 130, p. 70. 140, pp. 25-27. 141, p. 66. 142, pp. 86-90. 146, p. 13. 158. 167, pp. 25-26. 179, pp. 22-24.

Dobroff (9)

Loc: S½NW¼SE¼ sec. 3, (20-6E). **Access:** Road. **Prop:** 20 acres of deeded land. **Owner:** Mrs. Clarabelle Dobroff, Enumclaw, Wash. (1944). **Ore:** Iron. **Ore min:** Limonite. **Deposit:** Deposit of bog iron said to cover fair-sized area. **Ref:** 158.

Green Mountain (3)

Loc: SE¼ sec. 33, (24-9E), on Green Mtn., 6 mi. from Sallal Prairie, Snoqualmie dist. **Ore:** Iron. **Ore min:** Hematite, magnetite. **Ref:** 48, p. 10. 63, p. 41.

Green River

Loc: Snoqualmie dist. **Ore:** Iron. **Assays:** 45.51% Fe, 10.12% SiO₂, 0.05% S, tr. P. **Ref:** 13, p. 48. 48, p. 10.

Guye (Mt. Logan, Summit) (4)

Loc: Secs. 28, 32, and 33, (23-11E), about 2½ mi. from the railroad at Rockdale, Snoqualmie dist. **Elev:** 4,600 ft. **Prop:** 12 patented claims. **Owner:** J. F. Hubbart, Auburn, Wash. (1928—). F. W. Guye (1884-1928). **Ore:** Iron, lead, zinc, silver, gold. **Ore min:** Magnetite, pyrite, galena, sphalerite. **Gangue:** Garnet. **Deposit:** Deposits are of contact-metamorphic origin and very similar to those of the Denny property but are, in general, wider and more continuous. Known tonnage 10,000. A vein near the center of the Industry Lode claim is said to be 6 ft. wide and is well mineralized with galena and sphalerite. **Dev:** 1 adit, 4 or 5 open cuts and pits. **Assays:** Two representative analyses show 59.94% to 64.31% Fe, 2.0% to 2.64% Al₂O₃, 4.07% to 6.71% SiO₂, 0.32% to 0.93% CaO, 0.37% to 0.39% MgO, 0.019% to 0.020% P, 0.013% to 0.016% S, 0.11% to 0.24% TiO₂, 0.39% to 0.58% Mn. Other samples show as high as \$138 per ton in Pb, Zn, Au, Ag. Two assays on picked samples showed 0.04 oz. Au, 2.44 oz. Ag, 16.6% to 24.5% Pb, 32.4% Zn. **Ref:** 13, p. 45. 48, pp. 8-9. 63, p. 41. 111, p. 7. 130, p. 70. 140, pp. 25-26. 141, p. 66. 142, pp. 90-92. 146, p. 13. 167, pp. 26-27. 178. 179, pp. 22-24.

Kelley (Chair Peak) (5)

Loc: NW¼ sec. 30, (23-11E), on Chair Peak. **Ore:** Iron, copper. **Ore min:** Magnetite. **Ref:** 13, p. 42. 48, p. 10. 63, p. 41.

Mt. Logan

(see Guye)

Seattle Placer

(see under gold, placer)

Smith

(see Williams-Smith)

Summit

(see Guye)

Williams-Smith (2)

Loc: Secs. 35 and 36, (26-10E), 5 mi. from railroad at Miller R. **Elev:** 2,900 ft. **Prop:** 2 claims: Washington, Chicago. **Ore:** Iron. **Ore min:** Magnetite. **Deposit:** Ore bodies are probably contact replacements of limestone. Magnetite crops out in 3 places, the largest exposure being 51 ft. across. **Dev:** 257-ft. adit said to have been driven into one of the bodies. **Assays:** 66% to 67% Fe, 2.70% to 4.10% SiO₂, 0.0264% to 0.37% P, no S. **Ref:** 48, p. 9. 141, p. 66. 142, pp. 93-94. 158.

KITTITAS COUNTY**Balfour Guthrie**

(see Cle Elum River)

Bean Creek (5)

Loc: NE¼NE¼ and NE¼NW¼ sec. 17, (22-16E), on both E. and W. sides of Bean Cr. **Access:** Reached from the Teanaway R. road by 2 mi. of trail up Bean Cr. **Prop:** Part of a 25-claim block. **Owner:** In part by E. K. Brown, Ellensburg, and A. R. Jordin, Liberty, Wash. (1944). **Ore:** Iron, nickel, chromium. **Ore min:** Magnetite, hematite. **Deposit:** Sedimentary iron ore along contact of Swauk sediments with serpentine occurs in 2 areas about ¼ mi. apart. Exposed tonnage is 6,470, probable additional tonnage is 8,840, and possible additional tonnage is 850. **Dev:** None. **Ref:** 17, pp. 23-26. 90.

Big Creek (7)

Loc: Exact location unknown; said to be 5 mi. SE. of Easton. **Ore:** Iron. **Assays:** Av. composition from 5 analyses is 44.73% Fe, 27.35% SiO₂, 3.18% CaO, 0.35% MgO, 2.79% Mn, 1.20% P, 0.02% S, 0.08% Cu. **Ref:** 48, p. 12. 167, p. 24.

Cle Elum River, north deposit (Balfour Guthrie) (1)

Loc: Secs. 26, 34, and 35, (23-14E), on both sides of Cle Elum R., N. of Boulder Cr. **Elev:** 3,000 ft. **Access:** Cle Elum R. road. **Prop:** 14 claims of a 20-claim block. **Owner:** Balfour, Guthrie & Co., Ltd. (1946). **Ore:** Iron, nickel, chromium. **Ore min:** Magnetite, hematite, millerite, chrome spinel. **Gangue:** Diaspore, clachite. **Deposit:** Sedimentary iron occurring along contact of Swauk formation with peridotite. Drilling indicates an ore reserve of about 6¼ million tons of 40.86% Fe. **Dev:** Numerous trenches, open cuts, and diamond drill holes. **Assays:** Av. of analyses from 52 diamond drill holes was 40.82% Fe, 0.83% Ni, 2.40% Cr₂O₃, 8.83% SiO₂, 16.46% Al₂O₃, 0.051% P, 0.115% S, 0.46% Mn. **Ref:** 13, pp. 42-43. 17, pp. 40-41. 48, pp. 10-11. 78, pp. 29, 31. 85. 87. 87-A. 90. 130, p. 70. 135. 141, p. 65. 142, pp. 73-79. 146, pp. 13-14. 158. 167, pp. 22-25. 176. 177. 178. 179, 1949, pp. 67-76. 180.

Cle Elum River, south deposit (Balfour Guthrie) (2)

Loc: SE¼ and NW¼ sec. 1, N½ sec. 2, and E½ sec. 3, (22-14E), E. of Cle Elum R. **Elev:** 2,700 to 5,000 ft. **Access:** The Cle Elum R. road cuts the W. end of these deposits. **Prop:** 20 claims and 1 fraction. **Owner:** Balfour, Guthrie & Co., Ltd.

(1944). **Ore:** Iron, nickel, chromium. **Ore min:** Magnetite, hematite. **Deposit:** Sedimentary iron ore exposed in 4 areas along a distance of 2 mi. contains 3,370 tons of exposed, 21,550 tons of probable, and 191,360 tons of possible ore. **Dev:** 500-ft. adit, several caved adits, and a number of old open cuts. **Ref:** 13, pp. 42-43. 17, pp. 36-39. 48, pp. 10-11. 78, pp. 29, 31. 85. 87. 87-A. 90. 130, p. 70. 135. 140, pp. 27-36. 141, p. 65. 142, pp. 73-79. 146, pp. 13-14. 158. 167, pp. 22-25. 177. 178. 179, pp. 67-76. 180.

Devine

Loc: T. 22 N., R. 16 E. on Beaver Cr., about 3 mi. S. of Mt. Stuart, E. of Teanaway R. **Ore:** Iron. **Assays:** 46.23% Fe, 16.56% SiO₂, 12.60% Al₂O₃, 0.54% Mn, 1.11% Ni, 1.7% Cr. **Ref:** 114, no. 5, 1904. 142, pp. 84-85.

Durrwachter (Liberty Lode) (9)

Loc: Secs. 9 and 10, (19-15E), 2 mi from the railroad at South Cle Elum. **Elev:** 2,800 ft. **Prop:** 6 claims. **Owner:** Charles and E. G. Durrwachter (1922). **Ore:** Iron. **Ore min:** Hematite. **Gangue:** Garnet, glaucophane. **Deposit:** Ore body consists of 2 roughly parallel zones of hematite-bearing glaucophane schist of sedimentary origin. The upper body extends for more than 2,000 ft. and is several ft. thick in places. **Assays:** 26.56% Fe, 29.49% SiO₂, 0.24% P, 0.09% S. **Ref:** 48, pp. 11-12. 142, pp. 79-81.

Ellensburg Improvement Co.

Loc: S. of Cle Elum. **Prop:** 5 claims: Iron Heart, Iron Crest, Nigger Baby, Uncle Sam, Brother Jonathan. **Owner:** Ellensburg Improvement Co. (1892). **Ore:** Iron. **Ore min:** "Brown hematite." **Assays:** 54.30% to 55.00% Fe, 7.90% to 8.02% SiO₂, 0.09% to 0.13% S, 0.13% to 0.18% P. **Ref:** 13, p. 43.

Grand Entry

Loc: S. of Cle Elum. **Prop:** 1 claim: Grand Entry. **Owner:** Thomas Johnson, Seattle, Wash. (1892). **Ore:** Iron. **Ore min:** "Brown hematite." **Dev:** Small amount. **Ref:** 13, p. 43.

Iron Peak (4)

Loc: SW¼SW¼ sec. 7, (22-16E), and S½ sec. 12 and SE¼ and N½ sec. 11, (22-15E). **Elev:** 3,700 to 5,900 ft. **Access:** Reached from Teanaway R. road by 2 mi. of trail up Bean and Beverly Creeks. **Owner:** In part by E. K. Brown, Ellensburg, and A. R. Jordin, Liberty, Wash. (1944). **Ore:** Iron, nickel, chromium. **Ore min:** Magnetite, hematite. **Deposit:** 7 exposures of sedimentary iron ore along serpentine-Swauk formation contact contain 176,260 tons of exposed, 33,670 tons of probable, and 98,370 tons of possible ore. **Dev:** A few old open cuts. **Assays:** An av. of 13 analyses included with others from Blewett and Cle Elum showed 45.55% Fe, 1.79% Cr, 0.90% Ni, 0.05% P. **Ref:** 17, pp. 26-36. 90. 142, pp. 84-85.

Kittitas Placer

(see under gold, placer)

Liberty Lode

(see Durrwachter)

Manastash Creek (10)

Loc: Said to be on the headwaters of the S. Fk. of Manastash Cr. **Ore:** Reportedly iron. **Ref:** 167, p. 24.

Stafford Creek (6)

Loc: NW¼NW¼ sec. 14 and NE¼NW¼ sec. 15, (22-16E), on W. side of Stafford Cr. **Elev:** 4,000 to 5,100 ft. **Access:** 2½ mi. by road and 2 mi. by trail up Stafford Cr. **Prop:** Part of a 25-claim block. **Owner:** E. K. Brown, Ellensburg, and A. R. Jordin, Liberty, Wash. (1944). **Ore:** Iron, nickel, chromium. **Ore min:** Magnetite, hematite. **Deposit:** Sedimentary ore along

contact of Swauk formation with serpentine occurs in two areas about ½ mi. apart. Exposed tonnage is 1,650, probable tonnage 3,040, and possible tonnage 62,150. **Dev:** Several old open cuts. **Ref:** 17, pp. 20-23. 90.

Taneum (8)

Loc: On N. Fk. of Taneum Cr., 12 mi. SE. of Easton. **Ore:** Iron. **Deposit:** Said to be a deposit of iron ore 10 ft. thick. **Assays:** Five analyses show an av. of 44.73% Fe, 27.35% SiO₂, 2.79% Mn, 1.20% P, 0.02% S. **Ref:** 48, p. 12. 142, p. 86. 167, pp. 24-25.

Teanaway (3)

Loc: Probably sec. 12, (22-15E), about 3 mi. S. of Mt. Stuart, E. of Teanaway R. **Elev:** 5,000 to 6,000 ft. **Ore:** Iron, nickel, chromium. **Assays:** Av. of 13 analyses shows 50.13% Fe, 11.71% SiO₂, 9.63% Al₂O₃, 0.84% Mn, 1.09% Ni, 1.65% Cr, 0.27% P, no S. **Ref:** 48, p. 11. 142, pp. 84-85.

LINCOLN COUNTY

Davenport Placer

(see under gold, placer)

MASON COUNTY

Brown Mule

(see Triple Trip under manganese)

Triple Trip (1)

(see under manganese)

OKANOGAN COUNTY

Aztec (9)

Loc: NW¼ sec. 24, (40-30E), on Buckhorn Mtn. **Elev:** 5,100 to 5,400 ft. **Access:** 14 mi. from Toroda by Toroda Cr.-Nicholson Cr. road. **Prop:** 1 unpatented claim: Aztec. **Owner:** Henry T. Nelson, Frank Woodworth, G. W. Bartell, and W. O. Miller (1947). **Ore:** Iron. **Ore min:** Pyrrhotite, pyrite, magnetite, chalcopyrite. **Gangue:** Garnet, epidote. **Deposit:** Contact-metamorphic replacement of limestone. **Dev:** Caved shaft, drill holes. **Assays:** Drill hole at elev. 5,278 ft. at depth intervals of 480-490, 539-599, and 894-957 ft. showed 18.6% to 50.6% Fe, 0.01% to 0.07% Cu, 0.2% to 8.7% S, 0.002% to 0.027% P, 11.8% to 25.6% SiO₂, 0.05% to 0.29% TiO₂, tr. to .005 oz. Au, 0.1 to 0.4 oz. Ag. **Ref:** 15. 106, 2/4/32. 142, p. 63. 154, p. 48. 181.

Buckhorn

(see Magnetic)

Controller (26)

(see under copper)

Copper Queen (10)

(see under copper)

Copper World Extension (4)

(see under copper)

Crounse Placer (17)

(see under gold, placer)

Crystal Butte (16)

Loc: SW¼SE¼ and SE¼SW¼ sec. 35, (40-30E), ¼ mi. E. of old Crystal Butte mine, Buckhorn Mtn. area. **Elev:** 4,300 ft. **Access:** 5 mi. by road SE. of Chesaw. **Prop:** Several claims. **Owner:** Mr. Speddon, Seattle, Wash. (1945). **Ore:** Iron, copper. **Ore min:** Pyrrhotite, pyrite, magnetite, chalcopyrite, small amount of scheelite. **Gangue:** Quartzite, argillite. **Deposit:**

Replacement of quartzite and argillite near its contact with syenite. **Dev:** 5 prospect shafts, a 350-ft. adit, 2 trenches total 420 ft. in length, and 3 small open cuts. **Assays:** Chalcopyrite less than 1%. Only a few tons of magnetite in the deposit. **Ref:** 18, pp. 19-22. 37, p. 29. 154, pp. 48-49.

Dutch John (5)

(see under tungsten)

Eureka (24)

(see under zinc)

Finella (3)

Loc: On top of Kruger Mtn., sec. 7, (40-27E) (?), Oroville dist. **Prop:** 9 claims. **Ore:** Iron, silver. **Ore min:** Magnetite. **Dev:** Trenches and an adit. **Assays:** 13.4% to 24.0% Fe, tr. Au, tr. to 1.80 oz. Ag. **Ref:** 158.

Fuller (Pateros, Lone Pine) (6)

Loc: Near center sec. 26, (30-23E), just W. of the nose of the ridge back of Pateros. **Elev:** 2,300 ft. **Access:** 2½ mi. by road from Pateros. **Prop:** 2 claims. Lone Pine Nos. 1 and 2. **Owner:** Leased by S. J. Holden, Cle Elum, Wash., from the A. D. Fuller estate (1949). **Ore:** Iron. **Ore min:** Magnetite, a little chalcopyrite. **Gangue:** Hornblende, actinolite, biotite, calcite, epidote. **Deposit:** Ore is an intimate intermixture of magnetite with hornblende and actinolite. It occurs in veins and thin lenses in a body of hornblende, actinolite, and biotite. Exposure along the strike is 400 or 500 ft. in length and about 50 ft. wide. Sulfides in the zone are associated with quartz. **Dev:** 150 ft. of adits and a quarry. **Assays:** Analysis of better than av. grade ore shows 57.02% Fe, 4.51% SiO₂, 0.05% P₂O₅, 0.097% S, 3.25% TiO₂. A 10-ft. channel sample showed 40.50% Fe, 4.19% Ti, 0.026% P, 0.004% S, 0.02% Cu; and an 18-ft. channel sample showed 24.29% Fe, 3.10% Ti, 0.024% P, 0.038% S, 0.11% Cu. **Prod:** Reportedly 1,000 tons prior to 1943, 1,250 tons in 1943, 1 carload in 1944. **Ref:** 48, p. 14. 111, p. 7. 142, pp. 68-69. 157. 158.

Gold Axe (11)

Loc: About 500 ft. W. of center sec. 24, (40-30E). **Elev:** 4,900 ft. **Access:** ½ mi. by trail S. of Magnetic mine. **Ore:** Iron. **Ore min:** Magnetite, pyrrhotite. **Gangue:** Garnet, epidote, calcite. **Deposit:** Lens-like replacement deposits in limestone. **Dev:** 200-ft. adit, several shafts. **Assays:** \$16.00 to \$42.50 in all values. **Prod:** 6 cars shipped ran \$10 to \$20 per ton. **Ref:** 15. 54, pp. 7-8. 158.

Grant

(see Roosevelt)

Great Western (20)

(see under lead)

Hart Stone

(see Kelsey under copper)

Hidden Treasure (18)

(see under copper)

Home Run (22)

(see under silver)

Iron Cap (23)

Loc: Near W. line sec. 9, (31-30E), Nespelem dist. **Prop:** 1 claim: Iron Cap. **Ore:** Iron. **Ore min:** Limonite, magnetite (?). **Deposit:** Massive to earthy limonite 20 ft. or more in width at the surface, probably an oxidation of primary magnetite. **Ref:** 48, p. 14. 122, p. 83.

Iron Crown (25)

Loc: Near center sec. 10, (31-30E). **Prop:** 1 claim: Iron Crown. **Ore:** Iron (?). **Deposit:** Shaft sunk along the wall of granodiorite porphyry dike. Dike is post mineral and not genetically associated with mineralization. **Dev:** Inclined shaft. **Ref:** 122, p. 83.

Iron Mask

(see Copper World Extension under copper)

Kelsey (2)

(see under copper)

Lodge

(see Dutch John under tungsten)

Lone Pine

(see Fuller)

MacLean

(see Roosevelt)

Magnetic (Buckhorn, Neutral Aztec) (12)

(see also Aztec and see also Number Nine under copper)

Loc: N½ sec. 24, (40-30E), Myers Cr. dist. **Elev:** 5,000 ft. **Access:** 24 mi. by road to railroad at Curlew. **Prop:** 5 unpatented claims: Neutral, Copper Queen, Polaris, Crystal Springs, and No. 9. **Owner:** Keokuk Electro-Metals Co., Keokuk, Iowa (1951). British Columbia Copper Co. (1908). Magnetic Mining Co. (1939-1950). **Ore:** Iron. **Ore min:** Magnetite, pyrrhotite, pyrite, chalcopyrite, scheelite. **Gangue:** Garnet, epidote. **Deposit:** Contact metamorphic replacement of limestone containing an estimated several million tons of iron ore. **Dev:** Open pit 300 ft. long by 50 to 120 ft. wide by 100 ft. deep, an 85-ft. adit, and a 30-ft. tunnel. **Improv:** 2 cabins, 2 bunkhouses, cookhouse, blacksmith shop, compressor, small crusher (1949). **Assays:** A 300-lb. sample across a 30-ft. exposure showed 55.4% Fe, 0.5% Mn, 7.9% SiO₂, 1.4% S, 0.05% P. Some samples assay 80¢ to 85¢ Au. **Prod:** 2,000 tons 1919-1920, 35,550 tons 1937-1944. **Ref:** 15, 37, p. 28. 48, pp. 12-13. 58, p. 11. 97, 1917-1920, 1938, 1940, 1941. 108, 7/39. 111, p. 7. 130, p. 71. 141, p. 69. 142, pp. 61-65. 150, p. 34. 154, pp. 47-48. 158. 168, pp. 92-93. 177. 178. 179, 1949, pp. 12-17. 181.

Mohawk

(see under zinc)

Monterey (13)

(see under copper)

Myers Creek (8)

Loc: SE¼ sec. 23, (40-30E), near bottom of a deep valley, Myers Cr. dist. **Prop:** 2 patented claims. **Owner:** Myers Creek Mining Co. (1911). **Ore:** Iron, copper. **Ore min:** Pyrite, pyrrhotite, some chalcopyrite and magnetite. **Deposit:** Ore mass about 40 ft. wide enclosed in quartzite is composed largely of pyrite and pyrrhotite. **Ref:** 154, p. 47.

Neutral Aztec

(see Magnetic)

Number Nine (14)

(see under copper and see also Magnetic)

Pateros

(see Fuller)

Peerless (1)

(see under copper)

Ramsey (19)

(see under copper)

Rebecca (28)

(see under copper)

Red Bird (27)

(see under copper)

Roosevelt (Grant, MacLean, Teddy Roosevelt) (15)

Loc: Secs. 24 and 25, (40-30E), on NE. slope of Buckhorn Mtn. **Elev:** 4,600 ft. **Access:** Truck roads from both Chesaw and Curlew. **Prop:** 10 unpatented claims and 2 fractions. **Owner:** Mrs. Elise MacLean Dewar, Mrs. Joseph McCarthy, and Roger O. Oscarson, Spokane, Wash. (1945). Grant Consolidated Mining Co. (1907-1924). **Ore:** Iron, copper, gold, silver. **Ore min:** Magnetite, chalcopyrite, pyrite, scheelite. **Gangue:** Garnet, epidote, calcite, quartz, actinolite, titanite. **Deposit:** Contact-metamorphic deposit. **Dev:** 825-ft. lower adit with about 800 ft. of drifts and stopes. Several other short adits and open cuts are caved. **Assays:** 12 cars av. 7% to 9% Cu, \$2 to \$4 Au, \$2 to \$4 Ag. **Prod:** 12 carloads of hand-sorted ore prior to 1912 returned about \$21,000. 2,000 tons magnetite shipped 1919-1920. **Ref:** 15, 33, 1908, p. 737. 37, pp. 28-29. 48, pp. 13-14. 54, p. 7. 58, p. 67. 97, 1907, p. 475; 1908, p. 579. 98, 1920-1925. 105, 1902, p. 347. 111, p. 7. 112, p. 181. 116, no. 8, 1907, p. 14; no. 12, 1907, p. 15; no. 2, 1908, p. 24; no. 3, 1908, p. 60; no. 5, 1908, p. 117. 142, pp. 65-67. 154, pp. 44-46. 158. 179, pp. 17-18. 181.

Sherwood

(see Dutch John under tungsten)

Similkameen Falls Placer

(see under gold, placer)

Stone

(see Kelsey under copper)

Strawberry Creek Placer

(see Crounse Placer under gold, placer)

Strawberry Lake (7)

Loc: NE¼SE¼ sec. 7, (40-30E), ½ mi. W. of Strawberry Lk. **Elev:** 4,000 ft. **Access:** 3 mi. by road NW. of Chesaw. **Owner:** William and Theodore Buckley, Chesaw, Wash. (1945). **Ore:** Iron, tungsten. **Ore min:** Magnetite, pyrite, scheelite. **Gangue:** Garnet, quartzite. **Deposit:** Contact replacement of quartzite and limestone. Deposit 165 ft. long and 75 ft. wide with central core of nearly solid magnetite 70 ft. long and 50 ft. wide. **Dev:** 5 shallow prospect shafts, 2 short adits, and several old open cuts. **Assays:** Central core of deposit 80% magnetite. **Prod:** None. **Ref:** 18, pp. 22-24. 37, pp. 29-30.

Teddy Roosevelt

(see Roosevelt)

Texas Creek

(see Dutch John under tungsten)

Twin Pine (21)

(see under zinc)

PACIFIC COUNTY**Beards Hollow Placer (2)**

(see under platinum)

Chetlo Harbor (1)

(see also Chetlo Harbor under lode gold)

Loc: Sec. 9, (11-10W), at Chetlo Harbor at the mouth of Naselle R. **Ore:** Iron. **Ore min:** Pyrite. **Deposit:** Said to be a deposit about 3 ft. wide at the surface and extending for 7 mi. **Ref:** 158.

Fort Canby Placer (3)

(see under gold, placer)

McGowan Placer (5)

Loc: SW $\frac{1}{4}$ sec. 22, (9-10W), on N. bank of Columbia R. **Elev:** 6.4 to 11.7 ft. **Access:** Adjacent to U. S. Highway 101 about $2\frac{1}{2}$ mi. E. of Chinook. **Owner:** C. A. McGowan (1947). **Ore:** Iron, titanium, zirconium. **Ore min:** Magnetite, ilmenite, zircon. **Gangue:** Quartz, garnet, feldspar, mica. **Deposit:** Magnetite sand 1.5 to 8 ft. thick (av. 4.5 ft.) extends over an area 2,400 ft. long and 400 ft. wide. **Dev:** Drilling by U. S. Bur. Mines (1944). **Assays:** 25 drill holes show 21.12% to 43.46% Fe, 3.04% to 14.01% TiO_2 . A high-grade sample showed 53% magnetite, 18% ilmenite, 1% zircon. **Prod:** None. **Ref:** 48, pp. 14-15. **80.** 179, pp. 44-47.

Sand Island Placer (4)

(see under gold, placer)

PEND OREILLE COUNTY**Berkin**

(see Wolf Creek under lead)

Buzzell

(see Lucky Strike under zinc)

Davenport-Troyer

(see Gem)

Gem (Davenport-Troyer) (5)

Loc: Sec. 21, (39-43E), Metaline dist. **Access:** Road. **Prop:** 6 unpatented claims. **Owner:** Messrs. Troyer and Davenport, Metaline, Wash. (1941). **Ore:** Iron, lead. **Ore min:** Hematite. **Deposit:** Replacement of silicified limestone. **Dev:** 450 ft. of adits and raises. **Prod:** 800 tons of iron ore prior to 1941. **Ref:** 29, p. 43. **58,** p. 18.

Lead Metal (2)

Loc: Secs. 11 and 14, (40-44E), Metaline dist. **Access:** Road. **Prop:** 13 unpatented claims. **Owner:** Phil LaSota, Metaline Falls, Wash. (1941). **Ore:** Iron, lead, zinc. **Deposit:** A replacement deposit of iron with some lead and zinc has been exposed in several open cuts for a length of 800 ft. and width of 4 ft. **Dev:** 15-ft. shaft, numerous open cuts and trenches. **Ref:** 29, p. 61.

Lehigh (7)

Loc: One pit in center E $\frac{1}{2}$ sec. 30, (39-43E), and the other near NE. cor. same section. **Elev:** 3,200, and 2,900 ft. respectively. **Access:** Road. **Owner:** Lehigh Portland Cement Co. (1937). **Ore:** Iron. **Ore min:** Limonite. **Deposit:** Oxidized pyrite bodies. **Dev:** Pits. **Prod:** 1936, 1937. **Ref:** 128, p. 78.

Lucky Strike (3)

(see under zinc)

Red Crown (4)

(see under lead)

Reynolds Creek (9)

(see under copper)

Saddle (1)

(see under zinc)

Troyer

(see Gem)

Washington (6)

(see under lead)

Washington Rock

(see Washington under lead)

Wolf Creek (8)

(see under lead)

SKAGIT COUNTY**Eagle (1)**

Loc: Hamilton area. **Ore:** Iron. **Ore min:** Hematite. **Assays:** 58.00% Fe, 4.13% Mn, 7.00% SiO_2 . **Ref:** 13, pp. 45, 48.

Fairhaven (2)

Loc: Hamilton area. **Ore:** Iron. **Ore min:** Magnetite, hematite. **Deposit:** Ore minerals occur as a band in glaucophane schist. **Ref:** 142, p. 99.

Hamilton (Iron Mountain) (3)

Loc: Secs. 23 and 24, (35-6E) and sec. 30, (35-7E). Also eastward in secs. 20 and 21, (35-7E). **Elev:** 100 to 900 ft. **Access:** Road and logging railroad. **Prop:** At least 20 claims, among them the Hamilton, Mayflower, Blue Jay, Last Chance, Fairhaven, Washington, Inaugural, Scottish Chief, Manhattan, Helena, Treadwell, Legal Tender, Parnell, and Keystone. **Owner:** Dewey Smith and Fred Russell (1943). **Ore:** Iron, manganese. **Ore min:** Hematite, magnetite. **Gangue:** Glaucophane-garnet schist. **Deposit:** Discontinuous beds or lenses in fine-grained glaucophane-garnet schist of pre-Chuckanut age. Five more or less parallel beds are known in the 6 mi. between Hamilton and Birdview. Beds from a few ft. to 30 ft. in thickness. Known tonnage 20,000. **Dev:** Old openings now inaccessible. Considerable trenching by the W. P. A. in 1939. **Assays:** Av. composition from 15 analyses: 37.79% Fe, 24.73% SiO_2 , 6.01% Al_2O_3 , 6.56% $CaCO_3$, 9.75% Mn_2O_3 , 0.49% P, 0.16% S. **Prod:** About 5,000 tons mined. **Ref:** 13, p. 41. **48,** p. 15. **63,** pp. 18-21. **72,** p. 32. **111,** p. 7. **130,** p. 70. **140,** pp. 6, 9, 16, 19-25. **141,** pp. 66-67. **142,** pp. 95-102. **158.** 167, pp. 27-29. **177.** 178. **179,** pp. 27-36.

Iron Mountain

(see Hamilton)

Katie (4)

Loc: Hamilton area. **Ore:** Iron. **Ore min:** Hematite. **Assays:** 62.00% Fe, 3.00% Mn, 6.50% SiO_2 , tr. S, tr. P. **Ref:** 13, pp. 42, 45.

Last Chance (5)

Loc: Secs. 23 and 24, (35-6E), Hamilton area. **Ore:** Iron. **Ore min:** Hematite, magnetite. **Gangue:** Quartz, glaucophane, garnet. **Deposit:** 10-ft. bed. **Assays:** 60.00% Fe, 7.03% SiO_2 , 0.04% S, tr. P. **Ref:** 13, p. 41. **142,** p. 99.

Mabel (6)

Loc: Hamilton area. **Ore:** Iron. **Deposit:** 14-ft. bed traceable on the surface for 2,000 ft. **Ref:** 13, p. 41.

Mayflower (7)

Loc: Secs. 23 and 24, (35-6E). **Ore:** Iron. **Ref:** 142, pp. 96-99.

O'Toole (8)

Loc: Hamilton area. **Ore:** Iron. **Ore min:** Hematite, magnetite. **Deposit:** Bodies of ore 15 to 60 ft. thick reported. **Assays:** Av. of 7 analyses: 54.45% Fe, 9.77% SiO_2 , 0.155% S, 0.0557% P. **Ref:** 13, pp. 41, 44.

Pittsburg (9)

Loc: Hamilton area. **Ore:** Iron. **Ore min:** Hematite. **Gangue:** Quartz. **Assays:** 29.11% to 32.92% Fe, 28.05% to 32.46% SiO_2 , 0.20% to 0.31% P, 8.43% to 8.56% Al, 8.11% to 13.11% Mn, 6.71% to 8.06% Ca. **Ref:** 140, p. 24.

Puget (10)

Loc: Hamilton area. **Prop:** 6 claims. **Owner:** Seattle Manganese Iron Co. (1892). **Ore:** Iron. **Ore min:** Hematite. **Assays:** Av. of 6 analyses: 52.33% Fe, 11.38% SiO_2 , tr. S. **Ref:** 13, p. 41.

Scottish Chief (11)

Loc: Secs. 23 and 24, (35-6E), Hamilton area. **Ore:** Iron. **Ref:** 142, pp. 96-99.

Tacoma (12)

Loc: Hamilton area. **Ore:** Iron. **Ore min:** Hematite. **Deposit:** 20-ft. bed. **Assays:** 58.13% Fe, 4.12% SiO₂, 0.19% S, 0.06% P. **Prod:** 20 tons shipped to Irondale smelter. **Ref:** 13, pp. 43-44, 47, 63, p. 53.

Tennessee No. 3 (13)

Loc: Hamilton area. **Ore:** Iron. **Ore min:** Hematite. **Assays:** 42.90% Fe, 2.00% Mn, 21.93% SiO₂. **Ref:** 13, p. 48.

Treadwell (14)

Loc: Hamilton area. **Ore:** Iron. **Ore min:** Hematite. **Gangue:** Quartz. **Ref:** 140, p. 21.

Tyee (15)

Loc: Hamilton area. **Ore:** Iron. **Ore min:** Hematite. **Assays:** 63.07% Fe, 7.03% SiO₂. **Ref:** 13, pp. 44, 47.

Washington (16)

Loc: Secs. 23 and 24, (35-6E), Hamilton area. **Ore min:** Hematite, magnetite. **Gangue:** Glauconite schist. **Assays:** 56.72% Fe, 5.94% SiO₂, 0.03% S, 0.07% P. **Ref:** 13, pp. 44, 47, 142, p. 99.

NOHOMISH COUNTY**Arlington (2)**

Loc: SW $\frac{1}{4}$ sec. 20, (32-6E), N. of Arlington. **Owner:** Gerald A. Royce, Seattle, Wash. (1952). **Ore:** Iron. **Deposit:** Bog ore. **Ref:** 158.

Big Four

Loc: On N. slope of Big Four Mtn. **Owner:** F. E. Wing, Tacoma, Wash. (1952). **Ore:** Iron. **Ore min:** Magnetite, hematite. **Deposit:** Exposure 500 ft. wide of ore similar in appearance to the Cle Elum R. iron. **Ref:** 158.

Blue Stone (8)

Loc: NW $\frac{1}{4}$ sec. 4, (28-10E), Sultan Basin dist. **Access:** On small tributary of Elk Cr. about 3 mi. SE. of its confluence with the N. Fk. of Sultan R. **Prop:** 1 unpatented claim. **Owner:** C. F. Smith and Vance Curtiss (1943). **Ore:** Iron. **Ore min:** Magnetite, pyrite, specular hematite. **Gangue:** Actinolite. **Deposit:** Narrow lens-shaped contact-metamorphic deposit about 50 ft. long in quartzite and schist. **Ref:** 23, p. 74.

Coe (4)

Loc: Sec. 36, (32-5E). **Access:** 1½ mi. by road from railroad at Arlington. **Prop:** Deeded property. **Owner:** C. H. Tracey and Geo. Murphy, Arlington, Wash. (1938). F. O. Coe (1922). **Ore:** Iron. **Ore min:** Limonite, bog iron. **Deposit:** Ore is 2½ to 3 ft. thick and covers an area of about 2 to 3 acres. Est. 10,000 to 15,000 tons of ore in sight. **Ref:** 14, p. 13. 48, p. 16. 142, p. 103.

Darrington (5)

Loc: SW $\frac{1}{4}$ sec. 5 and NW $\frac{1}{4}$ sec. 8, (31-10E), Darrington dist. **Elev:** 1,600 ft. **Access:** 1½ mi. by trail from the Clearwater Guard Station. **Prop:** 2 claims: Iron Range Nos. 1 and 2. **Owner:** W. E. Gustafson, Sedro Woolley, Wash. (1943). **Ore:** Iron. **Ore min:** Magnetite, pyrite. **Gangue:** Quartz. **Deposit:** 7 outcrops of iron ore are exposed over a distance of 850 ft. Ore is bedded deposit of magnetite 8 to 10 ft. thick interbedded with schist and phyllite. Ore is cut by pyrite-bearing quartz stringers and veins in places. **Assays:** Much of the ore contains 40% Fe or more. **Ref:** 14, p. 8. 48, p. 17. 158.

Florence-Rae (9)

(see under copper)

Florence Rae (Rudebeck-Florence Rae) (7)

(see under copper)

Jefferson (3)

Loc: NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 29, (32-6E), 4 mi. NE. of Arlington. **Elev:** About 100 ft. **Access:** 4 mi. by road to railroad at Arlington. **Prop:** Farm land. **Owner:** Harold G. Miller, Arlington, Wash. (1938). Thomas Jefferson (1922). **Ore:** Iron. **Ore min:** Limonite. **Deposit:** Bog iron 2½ to 3 ft. thick covers 30 acres. Only a small tonnage available. **Dev:** Open pits. **Assays:** 51% Fe, 4.93% SiO₂, 0.02% S. **Prod:** Ore removed from 3 or 4 acres (6,000 tons). **Ref:** 14, p. 13. 48, pp. 16-17. 63, pp. 23-25. 105, 8/06, p. 223. 142, p. 103.

Lockwood Pyrite (6)

Loc: NE $\frac{1}{4}$ sec. 36, (29-8E), Sultan dist. **Elev:** 1,700 to 2,350 ft. **Access:** Reached from Sultan by way of Olney Cr. road for 4½ mi., thence by Blue Mtn. road and old logging road for 5 mi., thence E. by trail for 3 mi. **Prop:** 160 acres held under State land lease by Thomas P. Rook and John R. Allen, Seattle, Wash. (1951—). Formerly leased by A. H. Brueggeman and associates, Seattle, Wash. (1943-1951). Joseph F. Koehler, Everett, Wash., claims the same property by virtue of staked claims. (1943). **Ore:** Iron, sulfur, gold, silver. **Ore min:** Pyrite, pyrrhotite, sphalerite. **Gangue:** Quartz, sericite. **Deposit:** Some 3,500,000 tons of ore to a depth of 500 ft. in 3 tabular bodies, totaling more than 3,000 ft. in length, 1 to 75 ft. thick in metamorphic rock. **Dev:** 1 adit about 210 ft. long and about 35 open cuts, pits, and trenches. **Assays:** Assays on more than 150 samples from 5 to 52 ft. in length show 10% to 43% Fe, 9% to 46% S. Av. of 75 analyses shows 25% Fe, 25.6% S. Other analyses show 0.05 to 0.20 oz. Au, 0.40 to 0.90 oz. Ag. **Ref:** 14, p. 49. 23, pp. 79-86. 46, pp. 169-170. 158, 179, pp. 37-41.

Pilchuck Creek (1)

Loc: T. 32 N., R. 5 E., along Pilchuck Cr., about 6 mi. NW. of Arlington. **Ore:** Iron, titanium. **Ore min:** Magnetite, rutile. **Deposit:** Basal sediments of the Chuckanut formation. Low-grade ore covers large area. **Dev:** Shallow pits. **Ref:** 14, p. 13. 48, p. 17.

STEVENS COUNTY**Bechtol (8)**

(see under lead)

Bechtol Iron

(see Idler)

Big Iron (1)

Loc: SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 24, (40-37E), on E. side of Sulphide Mtn., Orient dist. **Elev:** 3,750 ft. **Access:** 14 mi. by road to railroad at Orient. **Prop:** 9 claims. **Owner:** W. Lon Johnson and associates, Colville, Wash. (1952). Northwest Magnesite Co. (1926). Big Iron Mining Co. (1897-1933). **Ore:** Iron, tungsten, gold, silver. **Ore min:** Magnetite, pyrite, pyrrhotite, chalcopyrite, scheelite, hematite, limonite. **Gangue:** Limestone, quartzite. **Deposit:** Elongate replacement zone in limestone and quartzite 480 ft. long, 130 ft. wide, 45 ft. deep. Ore occurs in bands separated by quartzite. **Dev:** Open pit 200 ft. by 100 ft. by 25 ft. deep, 2 short shafts, several caved shafts, 5 long trenches, several open cuts. **Assays:** Handpicked ore shipped av. about 56% Fe. 35,000 tons produced av. 80% iron oxide. **Prod:** 35,000 tons of magnetite ore from 1924 to 1937. Produced also 1940-1941. **Ref:** 7, pp. 82-83. 18, pp. 7-12. 30,

p. 118. 37, p. 64. 48, p. 21. 63, p. 106. 97, 1926-1931, 1934-1941. 111, p. 7. 114, no. 5, 1909. 158. 164, p. 275. 179, pp. 19-20.

Bill Nye (28)

Loc: Secs. 16 and 20, (31-39E), Chewelah dist. **Owner:** Gopher Mining Co., St. Paul, Minn. **Ore:** Iron. **Ref:** 158.

Brown (30)

Loc: N. center sec. 19, (31-39E), near the Crosby magnesite deposit. **Access:** Road to the Crosby Camp. **Prop:** 1 claim: Boise. **Owner:** J. Richard Brown, Spokane, Wash. (1944). **Ore:** Iron. **Ore min:** Hematite, martite. **Deposit:** Compact slaty hematite ore of high grade lying between dolomite and slate. Ore body is 15 ft. thick and exposed for 75 ft. **Dev:** Shallow surface pits. **Ref:** 158.

W. J. Bryan

(see Bechtol under lead)

Burrus (15)

Loc: Sec. 10, (37-40E), high on mountain. **Prop:** 8 unpatented claims. **Owner:** Abandoned (1941). **Ore:** Iron. **Ore min:** Magnetite. **Dev:** Location work only. **Ref:** 30, pp. 97-98.

Cannon (25)

Loc: NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 11, (31-38E), on crest of the Huckleberry Mtns. on second peak N. of the lookout station. **Elev:** 5,700 ft. **Owner:** Earl Cannon, Chewelah, Wash. (1944). **Ore:** Iron. **Ore min:** Hematite. **Gangue:** Quartzite. **Deposit:** A bed of hematite 6 in. thick interbedded with quartzite. Grade of ore is good, but quantity is too limited for commercial use. **Dev:** Open cut. **Ref:** 158.

Capital

(see Kulzer)

Chapman (18)

Loc: SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 28, (35-40E), Colville dist. **Owner:** R. F. Chapman, Colville, Wash. (1943). **Ore:** Iron. **Ore min:** Pyrite, pyrrhotite. **Gangue:** Quartz. **Deposit:** Sample submitted to the Division of Mines and Geology consisted largely of pyrite and pyrrhotite. Said to be a 50-ft. ledge or seam of this material. **Ref:** 158.

Chloride Queen (16)

(see under lead)

Clay (31)

(see also Hill)

Loc: Near center sec. 14, (31-38E). **Prop:** Part of Hill group. **Ore:** Iron. **Ore min:** Hematite, limonite, martite. **Deposit:** Iron-rich beds less than 4 ft. thick interbedded with metasediments. **Ref:** 158.

Colville Queen

(see Chloride Queen under lead)

Connors (34)

Loc: SW $\frac{1}{4}$ sec. 16 and NW. cor. sec. 21, (29-37E). **Elev:** 2,400 ft. **Access:** 8 mi. S. of Fruitland by road. **Prop:** State land. **Owner:** S. J. Connors leasing from State (1944). **Ore:** Iron. **Ore min:** Magnetite, limonite. **Gangue:** Limestone, chert. **Deposit:** Exposed lens of magnetite ore 8 ft. thick, 15 ft. wide, and 120 ft. long. Ore occurs as a replacement of limestone near intrusive granite. Ore body may be 10 ft. by 50 ft. by 350 ft. **Dev:** 8-ft. prospect shaft, caved adit, 4 open cuts. **Assays:** An est. 20,000 tons of 40% magnetite ore. **Prod:** None. **Ref:** 18, pp. 16-19.

Copper King (14)

(see under lead)

Deer Lake (23)

Loc: NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 3, (30-41E), on ridge extending NW. from Deer Lk. **Ore:** Iron. **Ore min:** Hematite. **Deposit:** Quartz vein at least 50 ft. wide and extending for at least 1 mi. NW. of Deer Lk. contains irregular fillings of hematite. No commercial ore in sight. **Dev:** Open cut. **Assays:** Hematite constitutes about 1% of the rock on the dump. **Ref:** 158.

Deer Lake Road (24)

Loc: SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, (30-41E), adjacent to and on E. side of the road to Deer Lk. **Access:** On road 4 mi. N. of Loon Lk. **Ore:** Iron. **Ore min:** Siderite, hematite. **Deposit:** Large quartz vein in which are crystals and bunches of siderite largely altered to hematite. Noncommercial occurrence. **Dev:** Open cut. **Ref:** 158.

Dunn Mountain

(see Taylor)

Electric Point (10)

(see under lead)

Gladstone (11)

(see under lead)

Grannis

(see Iron Duke-Iron Duchess)

Hill (Iron Jack) (29)

(see also Clay)

Loc: SE $\frac{1}{4}$ sec. 17 and NW $\frac{1}{4}$ sec. 20, (31-39E), about 9 mi. W. of the town of Valley. **Elev:** 3,050 ft. **Access:** Road. **Prop:** At least 14 patented claims: Hilltop, Iron Cup, Ash, Oak, Tamarack, Big Iron, Iron King, Iron Queen, Iron Hill, Iron Jack, Jackpot, Slay, Jackson, Bill Nye. **Owner:** J. J. Hill estate, St. Paul, Minn. (1941). **Ore:** Iron. **Ore min:** Hematite, magnetite, martite. **Gangue:** Calcite, quartzite. **Deposit:** Ore minerals occur in fractured and metamorphosed dolomite, probably as replacements. Also hematite interbeds in quartzite. It is reported that diamond drill holes revealed 4 veins of hematite, each about 14 ft. wide and running 62% Fe, 5% SiO₂. **Dev:** Extensive old workings, now caved. Also some diamond drilling. **Assays:** 68.57% Fe, 1.69% SiO₂, 0.024% P, 0.006% S. **Ref:** 30, p. 48. 48, p. 18. 141, pp. 67-68. 142, pp. 40-43. 158.

I. X. L. (3)

Loc: Sec. 11, (39-37E), Colville area. **Ore:** Iron. **Ore min:** Limonite, hematite. **Deposit:** Ore occurs as small irregular bodies in limestone. **Dev:** 2 adits, 60-ft. shaft at face of lower one. **Assays:** 50.48% to 56.58% Fe, 4.49% to 14.90% SiO₂, 2.00% to 2.48% Al₂O₃, 0.32% S, 0.30% to 0.31% P. **Ref:** 140, pp. 37-38. 142, pp. 46-47, 57.

Idler (Bechtol Iron, Tyee) (13)

Loc: Sec. 27, (39-41E), on the W. side of Deep Lk., Northport dist. **Elev:** 2,850 ft. **Prop:** 1 claim: Idler. **Owner:** David Bechtol and Firmer Walkely (1941). **Ore:** Iron. **Ore min:** Limonite. **Gangue:** Limestone. **Deposit:** Irregular ore body in limestone. It is 6 to 25 ft. wide and traceable for 1,000 ft. along its outcrop. Limonite is a surface alteration of siderite. **Dev:** Adits and open cuts. **Prod:** 300 tons of iron ore. **Ref:** 21, 30, p. 92. 48, p. 19. 73, p. 99. 141, p. 68. 142, pp. 48-50.

Iron Duchess

(see Iron Duke-Iron Duchess)

Iron Duke-Iron Duchess (Grannis) (32)

Loc: Center and SW $\frac{1}{4}$ sec. 9, and NW $\frac{1}{4}$ sec. 16, (30-38E), Deer Trail dist. **Access:** $\frac{1}{4}$ mi. S. by trail from a point 4.3 mi. NE. on Cleveland mine road from the Hunters-Springdale road. 18 mi. from railroad at Springdale. **Prop:** 3 patented claims:

Iron Duke, Duke's Daughter, Duchess. **Owner:** H. J. Grannis, Duluth, Minn. (1941-1949). **Ore:** Iron. **Ore min:** Hematite. **Deposit:** Lens of sedimentary hematite 300 to 400 ft. long and up to 10 ft. thick enclosed in argillite which is a red-bed that can be traced for several miles. **Dev:** 75-ft. shaft, open cuts. **Assays:** Owner reports a specimen showed 62.03% Fe, 0.014% P, 0.019% S. **Ref:** 30, p. 70. 157.

Iron Horse (2)

Loc: Near SW. cor. sec. 28, (40-37E), Orient dist. **Access:** About 300 ft. by trail N. of the Pierre Cr. road from a place $\frac{1}{2}$ mi. E. of the Pierre Lk.-Gilbert Lk. road junction. **Ore:** Iron, copper, gold. **Ore min:** Magnetite, pyrrhotite, pyrite, chalcopyrite. **Deposit:** Ore minerals occur as narrow stringers and pods in limestone. Several hundred tons of ore on the dump. Dip needle showed no deflection, indicating small deposit. **Dev:** Open cut, shaft reportedly 75 ft. deep. **Improv:** Cabin (1940). **Ref:** 116, no. 3, 1909, p. 64. 158.

Iron Jack

(see Hill)

Iron Tunnel

(see Thompson)

Keystone (McDonald) (12)

Loc: Secs. 17 and 20, (39-42E), 4 mi. E. of Leadpoint. **Access:** 14 mi. by road from railroad at Boundary. **Prop:** 5 unpatented claims. **Owner:** C. R. McDonald, Northport, Wash. (1941). **Ore:** Iron, lead, silver. **Ore min:** Limonite, galena, hematite. **Deposit:** Said to be ore chimneys similar to those at the Electric Point mine, in which is galena carrying small values in silver. **Dev:** 650 ft. of workings mostly in small shafts and open cuts. **Improv:** Cabin (1941). **Assays:** Lead ore shipped said to have run 72% to 80% Pb, 2 oz. Ag. Iron ore av. 57% Fe. **Prod:** A few tons of high-grade lead ore prior to 1941. Iron ore shipped for use in portland cement 1936-1940. **Ref:** 30, p. 103. 97, 1937-1941. 158.

Kulzer (Capital, Vigilant) (21)

Loc: Secs. 20 and 21, (31-41E), Chewelah dist. **Elev:** 2,200 ft. **Access:** 6 mi. by road from railroad at Valley. **Prop:** 4 claims: Vigilant, Capital, Climax, Ninety-eight. **Owner:** Leased by Three Peaks Mining Co., Salt Lake City, Utah (1951-1952). Mike Kulzer, Valley, Wash. (1910-1949). **Ore:** Iron. **Ore min:** Limonite, hematite. **Gangue:** Dolomitic limestone. **Deposit:** Irregular limonite-hematite bodies in limestone at its contact with granite. Ore zone from a few to 30 ft. wide and traceable for 500 ft. Ore also occurs at contact of limestone with overlying basalt. **Dev:** 15 adits, open cuts, and pits. **Assays:** Ore shows on analysis: 53.56% Fe, 8.45% SiO₂, 0.14% P, 0.004% S. **Prod:** About 7,000 tons produced prior to 1914 was used at Tacoma smelter as flux. Small production in 1921. Total of 12,000 tons reported. **Ref:** 12, p. 80. 13, p. 125. 30, p. 46. 48, pp. 17-18. 58, p. 71. 111, p. 7. 112, p. 156. 130, p. 71. 140, pp. 38-39. 141, p. 67. 142, pp. 37-40. 157. 158. 164, pp. 186-187. 167, pp. 31-32.

Lenna's Luck (Lenore's Luck) (17)

Loc: Near center sec. 30, (35-38E), about 300 ft. down the SW. slope of the ridge. **Prop:** 4 unpatented claims. **Owner:** Mrs. Lenore Marty, Kettle Falls, Wash. (1941). **Ore:** Iron. **Ore min:** Earthy and specular hematite. **Deposit:** 2 beds of iron ore in quartzite have a max. thickness of 6 in. and are separated by 6 in. of quartzite. Noncommercial quantity of ore exposed. **Dev:** 5-ft. pit. **Assays:** High-grade ore. **Ref:** 30, p. 59. 158.

Lenore's Luck

(see Lenna's Luck)

Loon Lake (22)

Loc: SE $\frac{1}{4}$ sec. 28, (31-41E), on S. slope of mountain N. of Loon Lake Copper mine. **Access:** Truck road within 300 ft. of workings. **Ore:** Iron. **Ore min:** Hematite, limonite. **Deposit:** A quartz vein 6 ft. wide in argillite and quartzite contains seams of hematite and limonite as much as 5 in. wide. Noncommercial deposit. **Dev:** Several open cuts. **Assays:** Iron constitutes less than 10% of the vein. **Ref:** 158.

Lucile (7)

Loc: Sec. 19, (40-39E), Northport dist. **Access:** 1 mi. from road. **Prop:** 1 unpatented claim. **Owner:** Ben Hofer and associates, Northport, Wash. (1941). **Ore:** Iron. **Ore min:** Hematite (?). **Deposit:** Said to be "dike" of hematite about 6 ft. in av. width. **Dev:** 8-ft. shaft (caved 1941). **Ref:** 30, pp. 104-105.

McDonald

(see Keystone)

McKale (20)

Loc: NW $\frac{1}{4}$ sec. 19, (32-40E), on W. side of Buck Canyon, Chewelah dist. **Elev:** 2,550 ft. **Access:** Road. **Prop:** 80 acres of deeded land. **Owner:** Messrs. Kulzer and Woodbury, Valley, Wash. **Ore:** Iron. **Ore min:** Hematite. **Gangue:** Quartz. **Deposit:** Quartzite, and siliceous limestone in which is said to be a 2-ft. vein of hematite. **Dev:** Adit caved 40 ft. from portal. **Ref:** 30, p. 45. 164, p. 187.

Mally (26)

Loc: W $\frac{1}{2}$ sec. 11, (31-38E), SW. of the 5,814-ft. peak in the Huckleberry Mtns. **Elev:** 4,400 ft. **Access:** 1 mi. by trail from end of old logging road just N. of the summit on the Cedonia-Blue Cr. road. **Owner:** Joe Mally (1944). **Ore:** Iron, reportedly chromium. **Ore min:** Hematite, martite, magnetite. **Gangue:** Quartzite. **Deposit:** A bed of hematite-rich argillite or quartzite interbedded with quartzite. Bed has a max. thickness of 20 ft. and is exposed discontinuously for a distance of a mile. **Dev:** 20-ft. trench. **Assays:** Sample from the 20-ft. trench reportedly assayed 35% Fe, 1% Cr. **Ref:** 158.

Marcus

(see under gold, placer)

Mullen Iron (6)

Loc: Sec. 12, (37-37E). **Access:** Near road. **Prop:** 40 acres of deeded land. **Owner:** Mr. Mullen, Chewelah, Wash. (1941). **Ore:** Iron, gold. **Ore min:** Pyrrhotite. **Dev:** Caved adits. **Assays:** Said to carry small values in gold. **Ref:** 30, p. 78.

Napoleon (5)

Loc: NW $\frac{1}{4}$ sec. 3, (37-37E), Orient dist. **Elev:** 2,350 to 2,600 ft. **Access:** 2 mi. by road from railroad at Boyds. **Prop:** 2 patented claims. **Owner:** Ideal Cement Co., Spokane, Wash. (1955—). P. Burns & Co. (1904-1905). British Columbia Copper Co. (1905-1916). Spokane Portland Cement Co., Spokane, Wash. (1943-1954). **Ore:** Iron, copper, gold. **Ore min:** Pyrrhotite, pyrite, magnetite, chalcopyrite, limonite, a little hematite. **Gangue:** Amphibole, garnet, calcite. **Deposit:** Amphibolite intruded by monzonite porphyry is host of the ore minerals. Contact deposit developed to width of 300 ft., length of 700 ft., and depth of 250 ft. Ore in lower workings is primary sulfides and at upper workings is mostly iron oxide. **Dev:** 1,230 ft. of surface work, 1,100 ft. of underground work, diamond drilling. Production is from open pit (1952). **Assays:** Run-of-mine ore said to contain approx. 33% Fe, 12% S, 10% CaO, 30% SiO₂, 0.3% Cu, 0.05 to 0.1 oz. Au, tr. Ag. **Prod:** 1907-1910, 1913-1917, 1938-1955. **Ref:** 7, pp. 89-91. 30, pp. 85-86. 33, 1907, pp. 391-392; 1908, p. 413. 48, p. 20. 97, 1907-1910, 1913-1917, 1938-1940. 104, 8/30/32, p. 29. 114, no. 5, 1909, pp.

60-61. 116, no. 9, 1907, p. 17. 133, p. 39. 142, pp. 55-56. 158. 164, pp. 293-294. 179, pp. 20-22.

Northwest Magnesite (27)

Loc: SW¼ sec. 3, (31-39E), on S. side of Huckleberry Cr. **Elev:** 3,000 ft. **Access:** Road from Keystone quarry. **Owner:** Northwest Magnesite Co., Chewelah, Wash. (1944). **Ore:** Iron. **Ore min:** Limonite and a little hematite and magnetite. **Gangue:** Quartzite. **Deposit:** Beds of ferruginous quartzite from 1 to 12 in. thick constitute a stratigraphic unit 10 to 15 ft. thick. Grade and quantity too low for commercial use. **Ref:** 158.

Pittsburg

Loc: Stevens County. **Ore:** Iron. **Ref:** 105, no. 4, 1904, p. 70.

Read (33)

Loc: N½ sec. 14, (30-37E), Deer Trail dist. **Elev:** 2,700 ft. **Access:** E. end of property crossed by the old Fruitland-Springdale road. **Prop:** 2 claims: Granite, Magnetite. **Owner:** J. W. Glasgow and Henry Becker, Hunters, Wash. (1944). **Ore:** Iron, copper. **Ore min:** Magnetite, chalcopyrite, scheelite. **Gangue:** Calcite, wollastonite, tremolite, garnet, ludwigite, fluorite. **Deposit:** Contact-metamorphic replacement of limestone. Deposit from a few in. to possibly 40 ft. wide, 3,000 ft. long. **Dev:** 5 shallow prospect shafts, 2 short adits, several open cuts. The 2 adits and 3 of the shafts are caved. **Assays:** Magnetite constitutes up to 80% of the body in places, but taken as a whole it is low grade. **Prod:** A few tons have been smelted. **Ref:** 18, pp. 12-16. 30, p. 63. 37, pp. 72-73. 48, pp. 18-19. 142, pp. 43-46. 158.

Scotia (4)

(see under copper)

Silver King

Loc: Valley dist. **Ore:** Iron. **Ore min:** Hematite and some magnetite. **Deposit:** Veins and bedded deposits principally in limestone and porphyry. **Assays:** 67.56% to 68.10% Fe, 1.12% to 1.66% SiO₂, 0.25% to 0.38% S. **Ref:** 140, pp. 36, 38.

Taylor (Dunn Mountain) (19)

Loc: Near NE. cor. sec. 31, (33-39E), on SE. slope of Dunn Mtn. in small valley. **Elev:** 3,000 ft. **Access:** 1½ mi. by road from the Mill Cr. road at a place 6 mi. W. of Addy. **Prop:** Deeded land. **Owner:** Charles Taylor, Chewelah, Wash. (1944). **Ore:** Iron. **Ore min:** Hematite, magnetite, martite. **Gangue:** Quartzite. **Deposit:** Several thin iron-rich beds in quartzite; the thickest is about 10 in. Noncommercial quantity of ore. **Dev:** Several trenches. **Assays:** Fair grade of ore but high in silica. **Ref:** 158.

Thompson (Iron Tunnel) (9)

Loc: E½ sec. 23, (39-41E), at NE. end of Deep Lk. **Elev:** 3,075 ft. **Access:** 14 mi. by road from railroad at Northport. **Prop:** 6 claims: Iron Rich, Iron Farm, Iron State, Iron Tunnel, Iron Slope. **Owner:** S. J. Morin, Spokane, Wash. (1949-1952). **Ore:** Iron. **Ore min:** Limonite, goethite, turgite. **Deposit:** Limonite occurs as vein in dolomite. It is 3½ to 60 ft. wide and continuous for 800 ft. A continuation of the vein has an av. width of 10 ft. and is traceable for 1,000 ft. **Dev:** 85-ft. adit, numerous pits and trenches. **Assays:** 16 representative samples from an av. width of 17.8 ft. showed an av. of 53.78% Fe, 0.155% P, 4.22% insol., 0.04% Mn, 0.1% Pb, 0.1% Zn, 0.5% S, 0.04% Ti. **Prod:** 1941. **Ref:** 30, p. 97. 48, p. 20. 73, pp. 97-98. 141, pp. 68-69. 142, pp. 51-54. 150, p. 40. 158.

Tyee

(see Idler)

Vigilant

(see Kulzer)

Wolfley (35)

Loc: SE¼SW¼ sec. 16, (29-37E). **Access:** 8½ mi. SE. of Hunters by road. **Prop:** State land lease. **Owner:** Conrad Wolfley (1944). **Ore:** Iron. **Ore min:** Magnetite, limonite. **Gangue:** Granite, limestone. **Deposit:** Ore body about 2 ft. thick along the contact of granite and limestone is exposed in 4 places. Ore can be traced magnetically for only 200 ft. Ore body too small for commercial use. **Ref:** 158.

Woohaa

(see Bechtol under lead)

THURSTON COUNTY

St. Clair Lake (Talcott) (1)

Loc: SE¼SW¼ sec. 6, (17-1E), on shore at southernmost tip of Lk. St. Clair. **Elev:** 75 ft. **Access:** 400 yd. of private road from the Olympia-Yelm highway at a place 9 mi. E. of Olympia. **Owner:** Noyes Talcott, Olympia, Wash. (1920—). **Ore:** Iron. **Ore min:** Limonite (bog iron). **Deposit:** Av. 4 ft. in thickness and is roughly 450 ft. long and 300 ft. wide. Contains 7,600 tons above the swamp border. **Assays:** One analysis shows 54.05% Fe₂O₃, 14.90% SiO₂, 7.25% Al₂O₃, 2.80% organic matter, 18.20% moisture. **Prod:** Small amount mined for mineral pigment. **Ref:** 58, p. 21. 158.

Talcott

(See St. Clair Lake)

WHATCOM COUNTY

Bellingham Placer

Loc: Bellingham area. **Ore:** Iron, gold. **Ore min:** Magnetite, hematite, limonite. **Deposit:** Samples of black sand tested by the U. S. Geological Survey. **Assays:** Two samples tested. One carried 1,978.6 lb. per ton of magnetite and hematite, the other 1,427.0 lb. per ton of limonite. Each carried tr. Au. **Ref:** 38, p. 156.

Church Mountain (3)

Loc: Approx. sec. 35, (40-7E) and southward. **Elev:** 1,300 ft. plus. **Access:** 4 mi. from the railroad at Glacier. **Ore:** Iron. **Ore min:** Hematite. **Deposit:** Impure hematite ore occurs on and in fossiliferous (probably Mesozoic) sediments. Ore formed by the dehydration of clayey and sandy limonite, and in part by surficial concentration of iron oxide derived from ferruginous sandstone. **Ref:** 48, pp. 21-22. 111, p. 7. 158. 179, pp. 51-52.

Hematite

(see Sumas Mountain)

Herringa

(see Sturman and Herringa)

Jim Mountain (5)

Loc: Said to be on Jim Mtn., possibly in sec. 9, (38-17E). **Access:** Said to be reached from Slate Cr. road by 5 mi. of trail up Canyon Cr. **Owner:** W. E. Gamble, Seattle, Wash. (1942). **Ore:** Iron. **Ore min:** Pyrrhotite. **Deposit:** Said to be 3 massive veins of pyrrhotite 12, 6, and 4 ft. wide. **Assays:** Samples spectrographed showed 70% to 80% FeS₂. **Ref:** 158.

Ruth Mountain Pyrite (4)

Loc: On Ruth Mtn., approx. in secs. 17 and 20, (39-10E), Mt. Baker dist. **Elev:** 2,500 to 6,600 ft. **Access:** Trail from Ruth Cr. road. **Owner:** Abandoned (1949). **Ore:** Iron, gold. **Ore min:** Pyrite. **Deposit:** Said to be four veins; one on top

of the mountain 30 ft. wide, one halfway down 15 ft. wide, one nearly down 20 ft. wide, and one near the river 10 to 15 ft. wide. **Dev:** Short crosscut adit on 15-ft. vein. **Assays:** Reportedly \$0.28 to \$176.00 Au. **Ref:** 158.

Sturman and Herringa (1)

Loc: Secs. 8 and 17, (40-3E), near Lynden. **Elev:** 100 ft. **Prop:** Farm land. **Owner:** Thomas Herringa and Mr. Sturman. **Ore:** Iron. **Ore min:** Limonite (bog iron). **Deposit:** Typical of several bog deposits in the vicinity of Bellingham, Ferndale, and Lynden. The Sturman deposit covers an acre or so to an av. depth of 2 ft. The Herringa deposit may cover 5 acres and varies in thickness from 0 to 2 or 3 ft. **Assays:** 39.67% Fe, 19.43% SiO₂, 0.153% P, 0.013% S. **Ref:** 48, p. 22. 142, pp. 103-104. 158. 179, pp. 42-43.

Sumas Mountain (Hematite) (2)

Loc: Sec. 2, (39-4E) and sec. 35, (40-4E), on W. slope of Sumas Mtn. **Elev:** 700 to 1,600 ft. **Access:** ½ mi. by trail. **Prop:** 7 claims known as the Hematite group held under prospecting permits from the State. **Owner:** Yamate Trading Co., Ltd., San Francisco, Calif., acquired 20-yr. lease in 1952. Hematite Iron & Gold Mines Development Co., John Westin, et al. (1934). **Ore:** Iron. **Ore min:** Limonite, scattered grains of magnetite. **Deposit:** Ferruginous mudstone or low-grade limonite occurs as a blanket on altered peridotite and underlies a basal conglomerate of the Chuckanut formation. Exposures as much as 20 ft. thick extend 1,500 ft. or so up the W. side of Sumas Mtn. **Dev:** 60-ft. adit, open cuts. **Assays:** A picked sample gave on analysis 37.21% Fe, 20.83% SiO₂, 0.20% P, 0.008% S. **Ref:** 48, pp. 22-23. 58, p. 29. 142, pp. 105-107. 158. 179, pp. 53-55.

LEAD

Properties—Lead is a bluish-gray metal, which on fresh surfaces has a bright luster that soon tarnishes on exposure to air. It is one of the heaviest metals, is very soft and highly malleable, but has only slight tenacity and low ductility. It is a poor conductor of electricity. It is very plastic, tends to flow under very light loads, and may be extruded easily to form wire or tubes. Lead has an unusual and useful combination of properties in having a low melting point but high boiling point. It is chemically inert to common corrosive conditions, and is attacked upon very slowly by dilute acids. It forms two series of chemical compounds, in which it shows valences of 2 and 4. Other properties are given in the table on page 12.

Uses—Lead was probably one of the first metals to be won from its ores by smelting. In 1950 about 52 percent of all lead consumed went into three products—batteries (32 percent), cable coverings (11 percent), and tetraethyl lead for high-octane gasoline (9 percent). About 9 percent of the total consumption went into paint pigments. In the two last mentioned uses the lead is in the form of chemical compounds; other important uses of lead compounds are in dyes, insecticides, ceramic glazes, medicine, matches, oil refining, and gas production. Other uses of lead in the metallic form are for ammunition, calking metal, casting metal, sheet metal, sheet lead, lead plating, collapsible tubes, foil, weights, ballast, shot, and pipe and containers for corrosive liquids. Lead is a constituent of many alloys, antimony being the most common alloying metal, but common also are tin, arsenic, and calcium. Some of these alloys are used as solder, type metal, bearing metal, pewter, and terne metal.

Production—In 1951 there were 11 lead smelters in the country, 1 each in California, Colorado, Idaho, Illinois, Kansas, Missouri, Montana, New Jersey, and Texas, and 1 in Utah. An important factor in the lead market is secondary lead, the recovery of which has exceeded mine production of new lead each year for many years.

The first recorded production of lead in Washington was in 1898, and some lead has been mined each year since then, although the amount has varied greatly from year to year. The record was in 1952, when 11,744 short tons valued at \$3,781,568 was produced. The previous record was in 1950, with 10,334 tons, which ranked Wash-

ington ninth among the states in lead output, and amounted to 2.4 percent of the total United States production for that year. Lead accounted for 26 percent of the value of metallic ore produced in Washington in 1952. Total output from 1898 through 1952 was 124,766 short tons, valued at \$25,617,254. Some lead has been mined in each of 10 different counties, but of recent years most has been from the Metaline district in Pend Oreille County and the Bossburg and Northport districts in Stevens County. In 1950 these 3 districts produced respectively 7,445 tons, 2,640 tons, and 237 tons of lead and ranked 10th, 20th, and 41st among the lead-producing districts in the United States. The mine of the Pend Oreille Mines & Metals Co. was the leading lead producer in the state in 1952.

Prices—The price of lead has very closely paralleled that of zinc for at least the past 60 years, and the prices of the two metals have been close to the same figure at any given time. During the period 1897 through 1950, the yearly average prices of the two metals have been within 2½ cents of each other each year except for the years 1915, 1916, 1947, 1948, and 1949. The spread was greatest at 8.5 cents in 1915, and the average spread for the years 1947 to 1949 was 3.88 cents. During the 56 years preceding 1953 the lowest price reached was 3.18 cents per pound in 1932 and the highest was 21.5 cents in late 1948. From 1900 until World War I, lead prices averaged between 4 and 6 cents per pound. The yearly average price advanced to 8.71 cents in 1917, but by 1921 had fallen to 4.55 cents. It then rose to 9.02 cents by 1925, after which began a continued drop which ended at the low of 3.18 cents in 1932. The price rose to 6.01 cents by 1937, dropped a little in 1938, then rose again to 6.5 cents by 1942, where it was maintained by government regulation through 1945. When the ceiling price restriction was removed the yearly average price rose rapidly to 18.04 cents by 1948, and late in that year the all-time high quotation of 21.5 cents was reached. The following year the price was dropping, and the average for 1950 was 13.3 cents per pound. The 1951 average was back up to 17.3 cents, but by April 1953 the price had dropped back to 12.5 cents. By October 1954 the price was back to 15 cents, where it remained through June 1955.